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STORE ATMOSPHERE:
COMPARING SUPER AND HYPERMARKET CUSTOMER PERCEPTION

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Abstract

In the competitive market that we live in, managers need to be empowered with the right tools to use in order to turn their business into an outstanding one. In the retail market, especially in a recession situation, price cannot be the only battle tool. The service and environment that each store provides to its customers can be used to create a unique combination, offering customers with a specific formula that they will not find anywhere else. But does a specific formula based on environment variables have the same perception effect on super and hypermarket customers? Does the store format influence the atmosphere perception when the same elements are used? This study aims to pursue this issue and provide some insights into which of the interior atmospheric variables are not sensitive to store format.

Resumo

No mercado competitivo em que vivemos, os gestores precisam estar habilitados com as ferramentas certas para usar de modo a transformar os seus negócios em excepcionais. No mercado retalhista, especialmente em situação de recessão, o preço não pode ser a única ferramenta de batalha. O serviço e o ambiente que cada loja oferece aos seus clientes, pode ser usado para criar uma combinação única, oferecendo aos clientes uma fórmula específica que não vai encontrar em qualquer outro lugar. Mas será que uma fórmula específica com base em variáveis de ambiente tem o efeito na percepção sobre os clientes de super e hipermercados? Será que o formato de loja influencia a percepção da atmosfera de loja quando os mesmos elementos são utilizados? Este estudo visa prosseguir esta questão e fornecer alguma perspectiva sobre qual das variáveis atmosféricas interiores não são sensíveis à formato da loja.

Key-words / Palavras-chave:
Atmospherics, Store Environment, Store Format, Customer Perceptions

JEL Classification System:
M31, M37

INDEX

1. SUMÁRIO EXECUTIVO

Numa altura em que o mercado retalhista procura encontrar a melhor forma de se destacar dos seus concorrentes, sem passar pelo preço, de forma a não perder margem, os profissionais de marketing debruçam-se sobre quais as melhores estratégias a utilizar de forma a personalizar e identificar as suas lojas perante os clientes.

Muitos estudos têm vindo a ser realizados nos últimos cinquenta anos, uns mais focados na componente estética da loja, outros mais na música ou no aroma, mas poucos ou nenhuns foram os que procuraram analisar a componente de atmosfera global da loja.

Este estudo visa avaliar alguns dos elementos de atmosfera interior da loja retalhista portuguesa, tendo como principal foco tentar perceber se, quando uma mesma estratégia de base é utilizada numa mesma cadeia de lojas, os resultados são iguais ou diferentes consoante a sua dimensão.

Numa primeira parte, este estudo mostra um apanhado e resumo de alguns dos muitos estudos já realizados sobre as várias variáveis da atmosfera de loja, introduzindo desta forma o assunto em estudo e abrindo caminho às questões que foram abordadas por via de inquérito a cerca de 300 clientes efectivos em lojas reais da área de Lisboa.

O inquérito realizado teve por base uma séria de questões que pretendíamos abordar e estudar, quer por serem tópicos nunca antes estudados ou por serem áreas de estudo cujas investigações anteriores não permitiram tirar conclusões concretas, quando comparando diferentes formatos de loja.

De entre as várias variáveis de atmosfera de loja, o presente estudo incidiu sobre a música ambiente, o odor / aroma, limpeza, arrumação, layout, tempos de espera, efeito multidão, temperatura, iluminação e recomendação. Uma vez que o objectivo principal do estudo era comparar a percepção do ambiente em formatos de loja distintos, todas estas variáveis foram analisadas comparando clientes de super e hipermercados.

Os resultados mostram que efectivamente o formato de loja tem impacto em algumas das variáveis de ambiente de loja. Embora alguns dos resultados apontem para a necessidade de aprofundar os dados agora obtidos através de mais investigação, outros mostram claros indícios de que algumas variáveis são sensíveis à dimensão da loja, enquanto outras não o são, como é o caso da limpeza.

Os resultados mostram que os clientes dos hipermercados revelam maior concordância relativamente à agradabilidade da música de fundo, seu volume e ritmo; à presença de um

aroma agradável e seu impacto no conforto do acto da compra; à adequabilidade da iluminação e temperatura da loja; à clara identificação da localização dos produtos e respectivo impacto no conforto do acto da compra; e, ao excessivo número de pessoas em espera para ser atendidas quer nos balcões de serviço, quer nas linhas de caixa e seu impacto negativo no conforto do acto da compra.

Por outro lado, os resultados mostram também que os clientes dos supermercados revelam maior concordância relativamente à presença do odor ou aroma em toda a loja; de que a temperatura em volta das zonas de frio é adequada e de que os tempos de espera para atendimento quer nos balcões de atendimento, quer nas linhas de caixa é razoável; que, quando necessário, conseguem encontrar um funcionário da loja e de que há resposta rápida da mesma em momento de maior afluência de clientes.

Estes resultados mostram-se valiosos e muito úteis para a gestão das superfícies comerciais e identificação de qual/is as melhores abordagens e estratégias a definir para melhorar de uma forma rápida e equilibrada o serviço prestado ao cliente, melhorando desta forma a sua satisfação, fidelização e recomendação a outros.

O presente estudo mostra também, através de alguns dos seus resultados, quais os caminhos a percorrer em futuras investigações, de forma a eliminar dúvidas existentes ou aprofundar os resultados obtidos.

2. INTRODUCTION

This thesis aims to study the influence of the store format on the effect of the store atmospheric on the consumer perception in the retail sector.

As Kotler proposed (1974), atmospherics is a highly relevant marketing tool for retailers and less for manufacturers and wholesalers, because these last have little control over the atmosphere of the retail store where the final goods are bough. Retailers have to give the most though to store environment, because buyers tend to have a large range of choice when they go shopping, and the atmosphere ends up being part of the total product. This becomes even more relevant when the buyer has a range of stores to shop in and has to choose between them. As the number of competitor retailers rises, so does the importance of atmospherics, especially if they have the same kind of products and services to offer to its customers. At the same time, in a very competitive market, where price differences are null or small, the differentiation between retailers is many times based on its atmospherics.

This is not only valid for general food and drug stores, but atmospherics is also important for stores that are aimed to a certain social class, life style, or type market niche. In these cases, the atmosphere has to be designed to meet the target group; otherwise, the store might attract the wrong type of client that it was originally intended. For example, if a antique furniture store opened to public while playing modern rock music, the client might become confused, since antique communicates ancient and old, while rock communicates active, rebel and modern. This type of store should clearly play low classical music, for customers to feel bonded to the furniture and free to take their time to glance and choose what to buy. Music and its effects on shopping behaviour have been studied throughout time by several authors such as Yalch and Spangenberg (1990 and 1993), Areni and Kim (1993), Chebat et al (2001), Grewal et al (2003).

Because of the effects on customers and potential buyers, it is crucial that the retail store atmosphere be designed and planned in order to stimulate the customers' appetite for the goods or services offered. Since this customization has to be done to meet the business target, the target audience must be previously defined.

In short, retail customers can be induced to present certain behaviour based upon the atmosphere created by retail management. Although it's been long since major retailers made relaxed decisions about store layout and design matters, several smaller and medium retailers still make random decisions about the environments they create. Those retailers making

random choices about store environments need to become more disciplined in their decision making. Colour, décor, display and other interior image variables have been studied by authors such as Donovan and Rossiter (1982), Ward et al (1992), Bellizzi et al (1983), Chebat and Morrin (2007), Yildirim (2007).

Different categories of consumers appear to have different behaviour when presented with the same atmospheric stimulus. Research shows that reaction to environmental music apparently varies by age and gender (Sommer et al, 1992; Yildirim et al, 2007). Thus, retail environments should be accomplished with a particular consumer in mind. Sometimes, modest and delicate changes to the retail environment are all that is required to change how shoppers behave inside their store.

First, a brief theoretical background on Store Atmospherics is presented, specially orientated to the retail market. This literature review aims to describe the most important issues on atmospherics and to analyse its importance.

Second, the study is presented including a short presentation of Sonae, in order to characterize the company where the survey took place. This survey was made to Sonae (the Portuguese retail market leader) customers at Modelo Bonjour and Continente stores, by which we hope to test if a similar strategic and marketing approach on store atmospherics has the same impact results in clients of different store format.

3. LITERATURE REVIEW

This literature review focuses on the effects of the various atmospherics variables and its effects on consumer satisfaction, buyer behaviour and store patronage.

As most authors state, a good retail atmosphere can mean the success or failure of a business. This review intends to give a global vision on the several issues of atmospherics but, at the same time, will focus on the variables that the further study will centre on. This focus and previous research conclusions will be included in the chapters of the store atmospheric where the variables are integrated. Some of the variables in study will not be develop here, such as temperature and cleanliness, because of the lack of prior research information.

Although the first authors (such as Cox, 1964 and 1970; Smith and Curnow, 1966 and Kotzan and Evanson, 1969) studied as the dependent variable value or/and volume of sales, most recent studies focus more on particular aspects of atmospherics, such as lighting and scent odours.

Even though some researches praise Kotler (1974) for being the first author to study atmospherics (e.g., Yalch and Spangenberg, 1990; Areni and Kim, 1993; Hui et al, 1997), there were a few articles written previously. The first study on atmospherics goes as far as 1964, when Cox studied shelf space and product categories and its influence on sales and concluded that shelf space influences sales of basic (staple) items but not on impulse goods (Cox, 1964 and 1970). In 1969, a relationship between sales and the number of shelf facings was also studied by Kotzan and Evanson (1969).

Since 1964, there have been innumerable articles on store atmosphere, pursuing diverse issues and its impacts on various aspects such as consumer behaviour and sales. Some of these studies look at atmospherics as a global issue and have tended to create groups of variables that cluster the different pieces of retail atmospheric environment (Kotler, 1974; Bitner, 1992; Sirohi et al, 1998; Turley and Milliman, 2000 and Hoffman and Turley, 2002).

3.a ENLIGHTENMENTS ON STORE FORMAT

In a summed way, we can define the retail industry as the activity of sales of good and services to final consumers, and the retailer as the economic agent that puts in practice such

sales. This means that the retail industry is composed not only by the sale of products at the stores but also through the commercial concepts of non-store (e.g., on-line sales) as well as services.

Thus, the retail industry, either in products or in services, is the last stage of the distribution circuit, where the retailers assume an important role of intermediary between producers, wholesalers or other suppliers and the final consumers. Retailers acquire goods and services through their suppliers and get them to the final consumers in small quantities.

As the name suggests, the retailers' retail or fraction large quantities of products in small quantities adequate to the purchasing capability and satisfaction of needs of the final consumers. Therefore, by retail commerce we mean a set of activities and businesses which involve the sale of goods and services for consumers, and their personal, familiar and domestic use.

The integrated (or organized) retail consists on every commercial company that, may be owned or linked to economic groups, through the vertical integration of the gross and retail roles, explore commercial nets or chains of point of sales, food or non-food specialists identified by the same banner an in which apply common policies and management agreements.

A retailer chain is formed by a multiplicity of points of sale controlled and managed in common. According to the north-American Census of Business, a retail chain is every commercial organization that operated eleven or more points of sale. Also, Dawson affirms that in United Kingdom, a chain should have at least ten points of sale. On the other hand, Berman and Evans define retail chain as the organization that manages in common several points of sale, using for such a certain level of centralization or coordination of sales and decision making (Rousseau, 1997, p.83).

Knowing that free service is a commercial system that consists on displaying the products on a exhibition and sales area of the store, allowing the free circulation of the customers in its interior and the free choice of the exposed goods, any set of points of sale in a free service system, identified by the same banner, regardless of its dimension, and that are under the same policy and management strategy, constitute one free service chain.

In the food area, the first point of sale in free service chains developed the concept of supermarket. Later, other chain concepts arised, such as hypermarkets, discounts, convenience stores or cash & carry. Non-food chains appeared later, such as toys, construction, books and dvd's, furniture and home appliances, constituting what we may call large specialized stores.

3a..i SUPERMARKETS

According to the Food Market Institute (FMI), the concept of supermarket is defined by the free service store, that include food and household cleaning and hygiene products, and that sells al least 2 million dollars per year (Rousseau, 1997, p.83). This concept appears in the 30's when it was admitted that only a large scale operation in free service could allow the distributor to combine a large volume of sales and low prices.

In order to be able to practice low prices, the concept needed to apply economies of scale and operational cost reduction at the points of sale, through:

- high volume of purchases, that would allow to negotiate with the suppliers better conditions;
- reduction of stock costs, limiting the assortment to high rotation products;
- reduction of sales personnel, adopting the free service strategy;
- multiplying the points of sale by strong expansionist policies that would allow to create economies of scale.

In Portugal, the first supermarket opened in May 1970, in Lisbon.

3a..ii HYPERMARKETS

Created in France, in 1963, this concept merged two successful models in USA – the food supermarket and the non-food discount store (this format has as its main goal to sell good or services at the lower price in the market).

Its definition in terms of sales area varies from country to country (2.000 square meters in Portugal, 2.500 s.m. in France and Spain and 4.000 s.m. in Germany). Since there has been a big implementation of this concept in Europe, with different sales areas, the hypermarket concept is nowadays, divided into small and big hypermarkets. This distinction is made by the total sales area, where the stores that have between 2.000 to 5.000 square meters of sales area are considered big supermarkets or small hypermarkets and the stores that have more than 8.000 square meters are considered big hypermarkets (from 5.000 to 8.000, the stores are considered hypermarkets). (Rousseau, 1997, p.93)

In Portugal, the first hypermarket to be opened was the Continente in Matosinhos (Oporto) in 1985.

3.b THE ATMOSPHERIC VARIABLES AND ITS IMPORTANCE TO MANAGEMENT

3b..i DEFINITION OF ATMOSPHERICS

According to Kotler (1974, p. 50), "*Atmospherics is the effort to design buying environments to produce specific emotional effects in the buyer that enhance his purchase probability*", and that "*Atmosphere is apprehended through the sense. Therefore, the atmosphere of a particular set of surrounding is describable in sensory terms.*" Philip Kotler divides these sensory terms in the five human senses: visual, aural olfactory, tactile and taste dimensions, but leaves out the last one, since it's not directly applicable on atmospherics.

Philip Kotler (1974, p.51) classification of atmospheric variables:

- Visual: colour, brightness, size and shape;
- Aural: volume and pitch;
- Olfactory: scent and freshness;
- Tactile: softness, smoothness and temperature.

Agreeing with Kotler, Harrell (1976, p. 36) goes further by saying that Kotler's definition of Atmospherics can be extended to not only include the physical structure that is created, but also the atmosphere that is created by the individuals that are shopping at the store. Thus, this individual atmosphere can have a dynamical quality, connected to the crowding conditions and its effect on the psychological atmosphere inducing different patterns of shopping behaviour.

In this paper, Kotler (1974) alerts for an important distinction between *intended atmosphere* and *perceived atmosphere*. While the first one is the atmosphere that is the set of sensory qualities that were designed by the retailer for its store, the second may vary from customer to customer, since it's the qualities that the customer perceives along his visit. Different colours, music, scents, or other atmospheric variables may have different impact on the customer behaviour.

In 2000, Turley and Milliman reviewed the atmospheric research made over the years and organized the atmospheric variables according to the next table.

Table 1. Atmospheric Variables (Turley and Milliman, 2000, p. 194)

1. External variables
   a. Exterior signs
   b. Entrances
   c. Exterior display windows
   d. Height of building
   e. Size of building
   f. Color of building
   g. Surrounding stores
   h. Lawns and gardens
   i. Address and location
   j. Architectural style
   k. Surrounding area
   l. Parking availability
   m. Congestion and traffic
   n. Exterior walls

2. General interior variables
   a. Flooring and carpeting
   b. Color schemes
   c. Lighting
   d. Music
   e. P.A. usage
   f. Scents
   g. Tobacco smoke
   h. Width of aisles
   i. Wall composition
   j. Paint and wall paper
   k. Ceiling composition
   l. Merchandise
   m. Temperature
   n. Cleanliness

3. Layout and design variables
   a. Space design and allocation
   b. Placement of merchandise
   c. Grouping of merchandise
   d. Work station placement
   e. Placement of equipment
   f. Placement of cash registers
   g. Waiting areas
   h. Waiting rooms
   i. Department locations
   j. Traffic flow
   k. Racks and cases
   l. Waiting ques
   m. Furniture
   n. Dead areas

4. Point-of-purchase and decoration variables
   a. Point-of-purchase displays
   b. Signs and cards
   c. Wall decorations
   d. Degrees and certificates
   e. Pictures
   f. Artwork
   g. Product displays
   h. Usage instructions
   i. Price displays
   j. Teletext

5. Human variables
   a. Employee characteristics
   b. Employee uniforms
   c. Crowding
   d. Customer characteristics
   e. Privacy

The table above represents an attempt to logically organize the atmospherics variables that influence the consumer's behaviour. By creating this organized table of variables, Turley and Milliman (2000) wanted to "*allow managers to begin to identify and tailor appropriate atmospheric elements in order to communicate the desired image or environment to a particular shopper segment or target market and induce a desires result from shoppers*" (Turley and Milliman, 2000, p.194).

Even when in a small region, we can find different cultures and values, and these have an impact on the way the customer perceives the store atmosphere upon its visit. Because of this and especially when designing a non-local, or even international strategy, these differences between culture and values are also influential factors that have to be considered when designing a retail store atmosphere. As an example of this, the colour white is for many

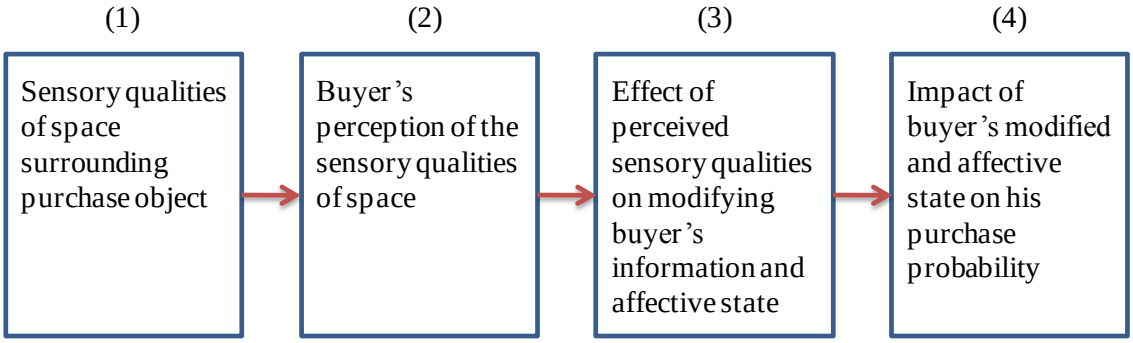
cultures associated to peace and purity, while in Chinese and Indian tradition, white is the colour of mourning, death, and ghosts.

Despite the continuous intention of the manufacturers on trying to impose certain marketing tools (such as handouts, stickers on the floor, promotional posters, etc…) to promote and boost their products sales, the retailer has to keep in mind the integrity and consistency of the atmosphere that is intended to be presented to the clients. Because of theses quarrels, it's natural the existence of a continuous negotiation between manufacturers and retailers about what can be placed at the stores, where and when.

As stated previously, according to Kotler (1974), an atmosphere of a particular set of surroundings is describable in sensory terms.

When shopping, the customer is surrounded by objects (products) lodged in the store's environment, characterized by certain sensory qualities, which may be intrinsic to the space or designed into the space by the retailer (Kotler, 1974). As stated, not all the customers perceive the environment the same way. Each buyer perceives certain qualities of the space, instinctively paying more attention to them, distorting and retrieving information in a different way. These perceptions may affect the person's information and affective state and these may increase his purchase probability (Kotler, 1974).

Figure 1. The Causal Chain Connection Atmosphere and Purchase Probability (Kotler, 1974, p.54)



Still according to Kotler (1974), the atmosphere can have three types of effects on purchase behaviour:

- Attention-creating, by standing out of the competitors for a given colour, noise, motion, etc, where atmospherics become a mean of creating attention of the customer;
- Message-creating, where the retailer expresses through atmospherics the store's intended audience, level of concern for customers, etc., i.e., atmospherics become a way to express things and ideas about the establishment to potential and actual customers;

- Affect-creating, through colours, music, textures present in the store, the environment may directly stimulate instinctive reactions that contribute to a better purchasing probability. An example of this can be the smell of just baked bread that may raise the instinctive desire to eat it, thus increasing the probability of purchase of bread.

The retail store atmosphere is composed by various components that may trigger sensations in the buyers that can create or increase an appetite for certain good, services, or experiences (Kotler, 1974). In this role, the atmosphere plays the role of converting buyers' intentions or desires into actual buying behaviour.

Also, Ward et al (1992) points out that "*whenever the firm's product is intangible (healthcare, education, transportation, professional services), customers are likely to rely on environmental cues to help them categorize and form expectations regarding the service they will receive*" (Ward et al, 1992, p.218).

3b..ii STRATEGIES IN ATMOSPHERIC APPROACH

The retail store atmosphere can be homogeneous or it can be scattered throughout the various store departments. While a standardized and harmonized atmosphere creates a unique and clear message to the visitor, it also limits the store to create specific messages or emotions in specific areas of the store to certain audiences (such as baby providers, for example). At the same time, this unique atmosphere has to be neutral and adjustable to all audiences.

By creating scattered atmospheres, the retailer can customize the store department to its main audience and create a bigger proximity with the customer (for the referred example, the atmosphere could be in baby colours, with pictures of pregnant women and babies, with a little play zone in the middle of the department, for instance). This higher proximity and connection with customers enables the retailer to create a closer relationship with the customer and increase store patronage.

While planning and designing the store atmosphere, the audience expectations have to be taken under consideration. Every customer has standards and values that intend to find at the local store where he goes shopping. If he goes shopping for low priced clothes, then probably the quality of the product will not be on the top of his concerns. But, if a recent parent is shopping for baby diapers and baby products, then he may search for a store where he can feel more comfortable and secure with the price and quality and of products and

services that encounters. Thus, the target audience must feel and believe that the values that it's seeking are potentially present at the store he's visiting. These values have to be projected through the store communication, products and prices, making atmosphere the major communicator of these values to the customer.

At the same time, the designer has to keep in mind that there are three major art forms that contribute to the atmosphere: store architecture (exterior structure of the building), interior design and window dressing, since they all influence the image that the customer perceives at the first glance at the store. Although neither of these should be neglected, the interior design tends to be the one to have more focus by the retailers, since it's where the client spends more time in touch with the atmosphere. Architecture and window dressing have also to be planned and designed carefully, since they are the face and call-out for customers.

Since atmosphere is composed by several variables, the retailer must identify the most important variables to use in order to meet its intended environment, although the other variables should not be lessened. If, for example, the smell of fresh baked bread (scent) is an important variable for a bakery, the same is not applied for a fabric store, where the product display and lighting should be considered.

The consumption of goods can be separated into three distinct actions — buying, using, and disposing. However, this does not apply to services where the production, acquisition, and use occur simultaneously. The evaluation of service products occurs both during and after consumption.

Basically, servicescapes refer to the environments in which services are delivered and where the firm and customer interacts (Bitner, 1992). The servicescape includes three components: facility exterior (exterior design, signage, parking, landscaping, and the surrounding environment); facility interior (interior design, equipment used to serve the customer directly or used to run the business, signage, layout, air quality, and temperature); and other tangibles (as business cards, stationery, billing statements, reports, employee appearance, uniforms, and brochures).

The typology of service organizations (such as a retail business) suggests that the physical environment may assume a variety of strategic roles in services marketing and management. The dimensions of the servicescape act as a whole, similar to a product's package, by passing on a total image and suggesting the potential usage and relative quality of the service (Solomon 1985).

Also, the servicescape can assume a spurring role by either helping or delaying the ability of customers and employees to carry out their respective activities. The floor plan,

layout of equipment, and equipment design can have a key impact on the ability of customers to complete their tasks and achieve their service goals. As a facilitator, the servicescape can also encourage and cultivate particular forms of social interaction among and between employees and customers. Ultimately, the physical environment can serve as a differentiator in signalling the intended market segment, positioning the organization, and transmitting distinctiveness from competitors.

As happens with products, atmosphere also has a tendency to wear-off the fresh and new look effect. The initial effect tends to be diminished by imitation or changing styles. Because of this, managers must be alert to signs that may call out for a make over and revision of store atmosphere.

In 1992, Bitner stated that "*in marketing, there is a surprising lack of empirical research or theoretically based frameworks addressing the role of physical surroundings in consumption settings. Managers continually plan, build, change, and control an organization's physical surroundings, but frequently the impact of a specific design or design change on ultimate users of the facility is not fully understood*" (Bitner, 1992, p.57). Although we couldn't find any literature regarding the current situation, we believe that Bitner's statement is still valid.

3b..iii STORE ATMOSPHERIC COMPONENTS

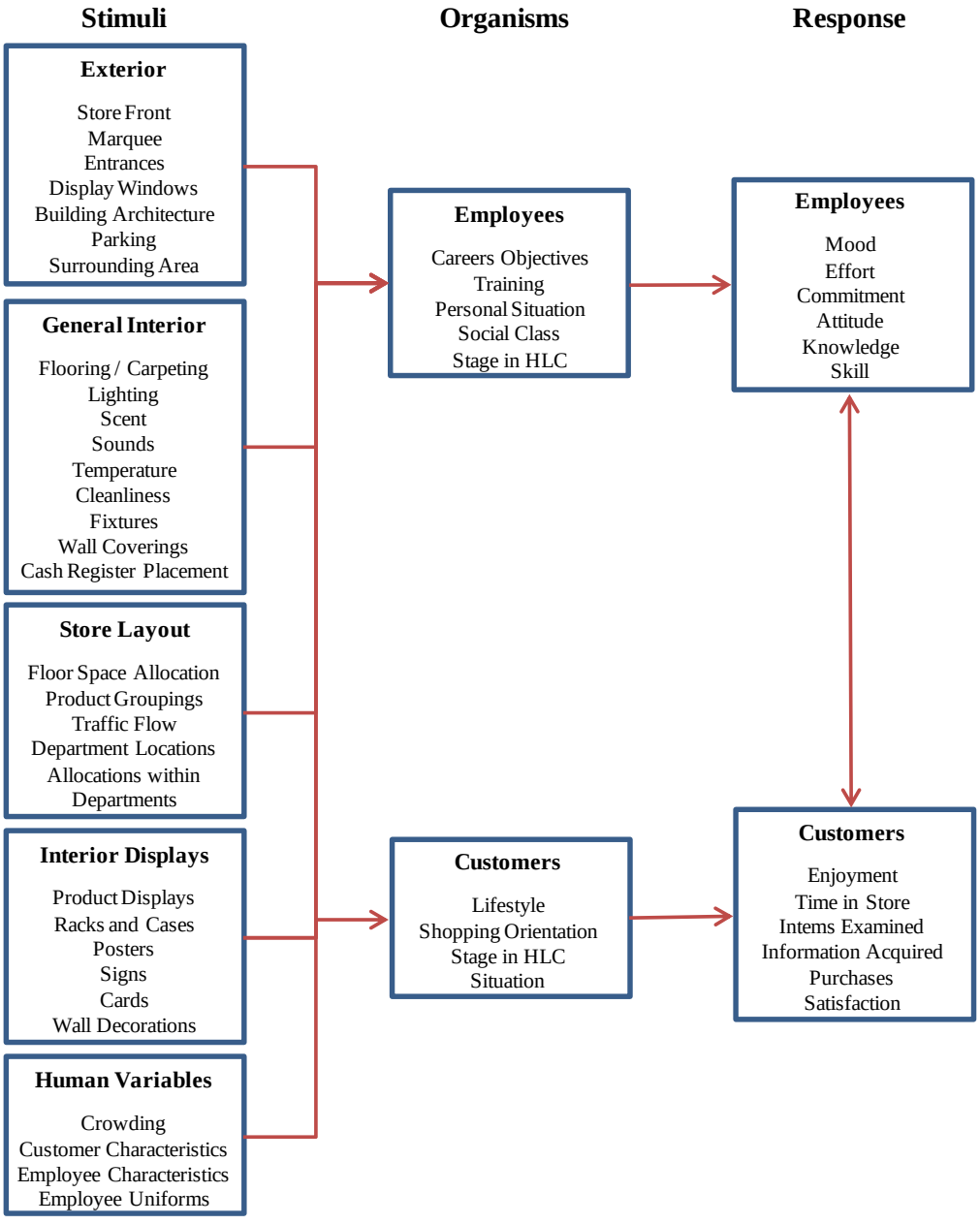
As mentioned previously, Turley and Milliman (2000) did a review on several published studies on atmospheric variables, such as scent, music and others. This literary review has so far focused on a general idea of atmospherics. From this point on, we will introduce some of the most important variables and models of retail atmospherics that some authors have studied and later focus and develop some of the variables that will subject of this study.

In figure 2, we can find a general schematic of the influence of retail atmospherics that Turley and Milliman drew based on their research.

3.b.iii.1 EXTERIOR VARIABLES

As we can see in the figure, the first atmospheric stimulus is the **exterior variables**. Although these variables will not be analysed and studied in the present study, we leave here a small description of them.

Figure 2. The influence of retail atmospherics (Turley and Milliman, 2000, p.196)



The general exterior variables include storefront, marquee, entrances, display windows, building architecture, surrounding areas and parking. Unfortunately, there are very few research studies on these variables. One of these was Ward et al (1992), that examined the

prototypicality of a store design (degree to which a store has attributes in common with other similar stores) on fast food restaurants. This study results showed that "*customer's perceptions of the prototypically of fast food restaurants, and their attitude toward such restaurants, are strongly influenced by environmental cues and that external environmental attributes are more important than internal environmental attributes for fast food restaurants*" (Ward et al, 1992, p.194).

These authors also found that exterior and interior environmental cues were significantly correlated to general similarity among such restaurants. Exterior similarity was a particularly strong predictor of typicality, attitudes, and outlet share. Also, they found evidence of a significant and positive relationship between typicality, consumer attitudes, and market share.

We must keep in mind that the exterior of the store is the first set of cues that a customer normally sees. Therefore, a retail manager must manage these variables in an effective way, since if the customer does not feel attempted to enter the store, the rest of the atmosphere may not even matter. So, these elements must be attractive and pleasant in order to induce the customer to approach behaviour and for the store to successfully fulfil its goals.

3.b.iii.2 INTERIOR VARIABLES

Another set of atmospheric stimulus variables is the general **interior** category. This is the category which the present study will focus on and goes deeper into. In this set of variables we can find flooring/carpeting, lighting, scents and sound, temperature, cleanliness, wall textures and colour usage. This is also the richest category in terms of number of research studies published, especially in music.

Overall perceptions of the general interior have been studied by several authors, such as Donoval and Rossiter (1982), Ward et al (1992) and Donovan et al (1994). These authors found that general perceptions of the store interior environment influenced customer behaviour and that these perceptions influenced approach/ avoidance, time spent at the store and sales.

The study of colours as an important aspect of store atmosphere has driven several authors to make specific studies on the influence of colours on the store atmosphere, as well as the usage of a specific colour as an inducer of shopper behaviour. Colour appears to have an influence on store and merchandise image, the ability to attract a consumer toward a retail display (Bellizzi et al, 1983), simulated purchases, purchasing rates, time spent at the store,

pleasant feelings (Bellizzi and Hite, 1992), colour décor and culture (Chebat and Morrin, 2007) and on mood and cognitive performance (Yildirim, 2007).

According to Bellizzi et al (1983) study, colour can physically attract customers towards a specific display, as colours do not influence approach behaviour but are associated with physical attraction. In their findings, they refer that, "*regardless of personal colour preference, individuals may be physically drawn to warm colours such as red or yellow, but feel that warm-colour environments are generally unpleasant*" (Bellizzi et al, 1983, p. 39). In their study, they concluded that yellow is the colour that draws more attention from customers, followed by red. On the other hand, the colours that draw less attention are cool colours, such as blue and green.

Based on previous researches which indicated that red is perceived as negative and tense as well as physically arousing, and that blue has been identified as calm, cool and positive, Bellizzi and Hite (1992), established some relations between colour environment and shopper behaviour. Their findings show that more positive retail outcomes occurred in blue rather than red environments. More purchases, fewer purchase postponements, and a stronger inclination to shop and browse was found in blue retail environments.

"Specifically, the distraction-arousal effects and the evaluative effects of red versus blue lead to favouring blue as opposed to red as a positive colour in a consumer decision-making context. If red creates a distraction, causes anxiety, results in impairment of motor tasks, produces judgmental errors, and is associated with negative perceptions in certain retail environments as outlined in the literature review, the colour is clearly inappropriate for situations in which the opposite effects are desired." (Bellizzi and Hite, 1992, p. 360) Based on their study, the authors indicate that, in order to create a desired atmosphere a blue environment is more appropriated than a red environment, but this can not be generalized since there are some specific products for which a warm-colour environment has shown to be more effective (e.g., coffee, sports cars).

Chebat and Morrin (2007), look into the effect of colour décor and cultures. They point out that colours often play a key role in consumer perceptions, because they are associated with consumer cultures or subcultures. It may be that, the symbolic meanings cultures attribute to colours are responsible for observed effects, rather than the colours themselves having an impact on individuals. Still according to these authors, blue, green and white are clustered close together and associated with peaceful, gentle, and calming meanings, while yellow, gold, orange, red and purple are associated with emotional, vibrant, hot, active and sharp meanings.

The results of Chebat and Morrin (2007) research indicate "that mall décor schemes can have significant effects on shoppers' perceptions not only of their environment but also of the quality of products sold in the environment" (Chebat and Morrin, 2007, p.194), which in turn, affected perceptions of the quality of the products sold in the environment. Essentially, Chebat and Morrin (2007) found different effects of the décor schemes by consumer subculture segment, with French-Canadians responding more to the warm colour décor manipulations and Anglo-Canadians responding more to the cool colour décor manipulations. Although this study focused on Canadian consumer segments of French versus Anglo cultural heritage, it could be stated that these findings suggest that similar differences may be found in other cross-culture environments (e.g. in the United States, the African-American subculture may respond differently than the Caucasian subculture, as well as the Hispanic population; the fast-growing Asian subculture represents another major force in the economies that could exhibit different responses to atmospheric colour).

According to Yildirim et al (2007) study, customers' perceptions of two different colours of an interior, regarding its atmospheric attributes, are different and statistically significant. According to their results, customers have a more positive perception of violet interiors than yellow interiors.

Yildirim et al (2007) state that it has been suggested that the colour yellow, is a good colour for libraries and classrooms, since it was thought to stimulate the intellect, but art therapists have observed that people that are inclined to commit suicide tend to use yellow pigment generously in their paintings (as did Van Gogh). On the other hand, according to Yildirim et al (2007) results, younger customers (under 30 years old) had a more positive perception of store atmospheric attributes than older customers (over 30 years old). In general, it can be said that there is a reverse relationship between age and the perception of store atmospheric attributes, i.e., as age and experience increases, a more critical attitude is displayed. Furthermore, this result is important since it validates that atmospheric attributes in commercial environments should be used by different age groups for different purposes.

The other result of Yildirim et al (2007) study is that the difference in customers' perceptions of store atmospheric attributes between the gender groups has been found to be important. "*According to the results, male customers had a more positive perception of store atmospheric attributes than female customers. In fact, females were more critical than males about the atmospheric attributes. This situation can be explained through differences in anatomy, physiology and psychology. Males and females seem to have different perceptions based on sentimentality, lifestyles, motivation, attitude towards decoration and an importance*

of being tidy. For example, females can be generalized to be more sensitive than the males about tidiness, which can cause them to behave more critically" (Yildirim et al, 2007, p.3239).

Moreover, Sommer et al. (1992) found that women and older people spent more time in the store than did men or younger people. From this result, it can be inferred that women and older people are more critical in their shopping decisions.

Other general interior variables such as temperature and cleanliness have not been empirically studied as far as previously mentioned but will be studied on this present study. The only text that we were able to find regarding cleanliness dates from 2005 by an anonymous author that states that the basic condition of the store for the customers was how clean and well-kept it was. Thus, the author states that 90% of the subjects ranked cleanliness as the most important element in deciding where to shop (Anonymous, 2005).

3.b.iii.2.1 MUSIC

As stated previously, music is the most studied interior variable. Many authors have studied music and concluded that it has a significant impact on sales, arousal, perceptions of time spent in the store, in-store traffic flow, and visual stimuli perception in the retail store. Nevertheless, the impact of music can be mediated by the music volume (Smith and Curnow, 1966), music tempo (Milliman, 1982 and 1986; Chebat et al, 2001), age of the shopper (Yalch and Spangenberg, 1990), by the use of background or foreground music (Yalch and Spangenberg, 1990 and 1993; Areni and Kim, 1993), and wait expectations (Grewal et al, 2003). Another important finding in this area is that music can influence customer behaviour, even when consumers are not conscious of its existence (Milliman, 1982).

Apart from the obvious commercial matter, the role of music in consumer research is of considerable theoretical interest, since music is capable of inducing affective and behavioural responses in consumers. Any musical composition is basically composed of three primary dimensions: a physical dimension (tempo, volume, pitch, and rhythm), an emotional tone, and a preferential dimension (the degree to which a person likes the music).

Music has been manipulated to study its influences on sales, time spent shopping and loudness rating (Smith and Curnow, 1966), where results suggested that time in store was significantly lower when the music was loud but total sales were not influenced, therefore increasing the sales per minute.

According to Milliman (1982), there is a relation between the tempo of in-store background music and the sales volume per customer in a supermarket environment. Based on his study he was able to conclude that the higher sales volumes were consistently associated with the slower tempo musical selections while, in contrast, the lower sales figures were consistently associated with the faster tempo music (1982, p. 90).

This means that, on a slow tempo background music customers move more slowly throughout the store and are tended to buy more, while on a faster tempo background music, as customers move more quickly through the store, they tend to purchase less.

Milliman (1982) also points out that consumer behaviour can be influenced by background music, positively or negatively, but at the same time the consumer awareness of store background music is relatively low.

In a latter study done in a restaurant environment, Milliman (1986) found that music tempo variations can significantly affect the time customers take to complete a meal as well as the amount of money they spent namely on alcoholic drinks. This study findings show that, after a meal was served, customers on a slow-music environment took significantly more time to finish their meals and leave than those customers under a fast-music environment. On the other hand he could also assess that there wasn't a significant difference between the money spent on food in either music tempos, but the money spent on alcoholic drinks was significantly higher on a slow-music environment. Apparently the tempo of the background music had no influence on the number of customer groups that left the restaurant before being seated which remained about the same in both slow- or fast-tempo music (Milliman, 1986, p.288).

In this study Milliman (1986) concluded that with slow-tempo background music, patrons stayed longer, ate about the same amount of food, but consumed more alcoholic beverages showing that, the slower, perhaps more soothing background music, created a more relaxing environment (Milliman, 1986, p.288).

A study by Yalch and Spangenberg (1990), indicates that many retailers and service organizations use some form of environmental music to enhance their atmosphere and influence customer behaviour (Yalch and Spangenberg, 1990, p.55). Their study shows a preference for foreground music but customer's moods and unplanned purchases were not substantially enhanced by hearing foreground music. Yet, customer's perceptions of their shopping time varied with the type of music, depending on their age. Counter to expectations, the effects of music did not vary with the type of music, depending on their age, nor with the time of day. These results suggest that choosing to play store music solely to satisfy

customers' preferences may not be the optimal approach but rather music should be varied across areas of a store that appeal to different-aged customers (Yalch and Spangenberg, 1990, p.55).

Their results suggest that shoppers do respond psychologically and behaviourally to music even though few shoppers consciously note its presence. When shoppers were exposed to music that they normally listen to (foreground for young shoppers and background for older shoppers), they reported spending less time in the store that they had intended relative to when they listened to music they do not usually select (background for young shoppers and foreground for older shoppers).This study also suggest that consideration be given to varying the music between mornings, afternoons, and evenings as well as during the week and the weekend (Yalch and Spangenberg, 1990, p.61).

The result of the study made by Areni and Kim (1993) on a wine shop environment, point to the fact that classical music as background influenced shoppers to spend more money, not that they increase the amount of wine they purchased, but they selected more expensive merchandise. These authors also refer the MacInnis and Park's (1991) notion that music is more persuasive when it "fits" the persuasions context is employed to account for these results. When consumers are seeking sophistication, in-store cues must suggest, and facilitate that experience. Classical music may communicate a sophisticated, upper class, atmosphere, which is perceived as a suggestion to consider only expensive merchandise. Although, the number of shelf items examined, handled and purchased, and the amount of time spent did not vary by music condition.

The findings of Areni and Kim (1993) study support the recommendation done by Yalch and Spangenberg (1990) that any retailer wishing to convey a high prestige, high price image should consider classical background music, since classical music evokes perceptions of higher priced store merchandise.

According to Yalch and Spangenberg (1993), playing the appropriate music for a specific department enhanced the environment resulting in more shoppers making purchases and spending more money. Thus, additional analysis suggests that store music interacts with age but not gender. Furthermore, this study also concludes that other factors such as shopping the week or on a weekend or holiday, shopping with someone or alone, or shopping for a specific item or browsing, did not substantially change the way shoppers reacted to the different music conditions.

Supporting the view that music may influence shopping by stimulating cognitive associations rather than altering emotional states, the authors also found that moods did not

explain the music effects but store perceptions partially did, since "*shoppers perceived the departments to have more desirable characteristics when certain types of music were played. They also purchased more.*" (Yalch and Spangenberg, 1993, p.135). The results also support the suggestion that the effects of store music may be altered by departmental and customer characteristics. Even though the overall effects on the type of store music being played were unimportant, they varied substantially by the type of shoppers and department.

In 1997, Hui et al, found that "*in the context of waiting, music does not act as a distracter to reduce perceived wait duration but operates through induction and transfer of mood and emotion. A piece of music may increase perceived wait duration but it may still be an effective tool to minimize any negative consequence of waiting*" (Hui et al, 1997, p.102). As revealed by Hui et al findings (1997), pleasant music stimulates a more positive reaction to the service environment, and also helps to improve consumers' emotional response to waiting.

Chebat et al (2001, p.115) studied, the effects of music on attitudes toward the store, the salesperson, and the visit to the store are moderated by cognitive processes (number of thoughts and depth of information processing), whereas previous studies focused on emotional moderators. Relaxing music (i.e., both pleasant and low arousing) is shown to increase cognitive activity when other cognitive stimulation is low (mainly when sales arguments are weak).

Baker's *et al* (2002, p. 136) findings show that music cue perceptions have a consistent but modest negative effect on perceived psychic costs ("*representing consumers' mental stress or emotional labour during the shopping experience*" (Baker's *et al,* 2002, p.122)). On the other hand, according to these authors, music cues did not have a significant impact on perceived time/effort costs, defined as consumers' perception of the time and effort they are likely to expend shopping at the store.

Grewal *et al* (2003), concluded that classical music had a positive effect on store atmosphere evaluations, consistent with previous store atmosphere studies (e.g., Hui et al., 1997). They also point out that various types of music may have a differential effect on store atmosphere in other types of stores (e.g., country-western music might contribute positively to the perception of a Wal-Mart store located in Texas, USA).

Beverland *et al* analysed in 2006 the in-store music and the brand-consumer relationship. In this study, the authors alert that guaranteeing fit between the music and other in-store atmospherics (and products) is crucial for consumers with limited brand knowledge since they are more prone to use store cues to form expectations of the product. Also, music may influence the meaning consumers get about the brand (Spangenberg *et al*, 2005) and it is

likely to reinforce established brand meanings thus enhancing the brands equity (Keller, 2003). At the same time, misfit may result in counterfactual thinking about the brand, resulting in consumers reassessing their view of the brand and searching out further information sources to form a new judgement about the brand's position (McColl-Kennedy and Sparks, 2003), as Beverland *et al* (2006) findings showed.

Beverland et al (2006) findings show that in "*fit between in-store music and the brand operated at many levels. For consumers with clearly formed expectations of the brand, fit results in brand reinforcement and a positive in-store experience, although one that is more satisfactory rather than delightful. For consumers without prior experience of the brand, music is an important signal of product quality and appropriateness (i.e., target market). As a result, this form of fit helps introduce the brand to the consumer. In other cases, music can play a key role in creating a powerful all encompassing experience resulting in delight. In each case, in-store music plays a key role in reinforcing, forming and transforming a consumer–brand relationship.*" (Beverland et al, 2006, p. 985).

Beverland et al findings also show that "*misfit is beneficial for firms wishing to reposition their brands, although changes in music style may have unintended consequences (such as repositioning the brand down-market)*" (Beverland et al, 2006, p. 987). Misfit and music volume effects are key drivers in "atmospheric responsiveness" (Machleit et al., 2005) that contribute to both negative in-store experience and patronage decisions. Music that is too quiet imposes an undesired "obligation" to interact with sales staff, while very loud music intrudes on the overall experience (Arnold et al., 2005). On the other hand, misfit triggers counterfactual thinking about the brand and store, potentially leading to discomfort, exit, or non-entry.

3.b.iii.2.2 SCENT

Another of the general interior atmospheric variables is scent (aroma or odour). Although there are not a lot of empirical studies in this area, this variable has attracted some research interest in the last decade, examining the effects of scent on shopping behaviour (Hirsch, 1995; Mitchell et al, 1995; Spangenberg et al, 1996; and Chebat and Michon, 2003).

Although Hirsch (1995) and Mitchell et al (1995) found that different types of odour significantly influenced consumer behaviour, Spangenberg et al (1996) found that the nature of the scent itself did not have influence behaviour, but that its presence or absence did. On the other hand, Chebat and Michon (2003) studied the influence of scent on shopper's

emotion, cognition and spending in a mall environment. Put together, these studies suggest that scent can influence sales, processing time, perceived time at the store as well as spending.

Smell is a very powerful sense because of its ability to appeal to emotions. Since sales promotion must appeal emotionally, employing an emotional appeal like smell allows shoppers to become immersed in the experience and encourages them to stay longer at the store.

Smell also causes people to inquire; when shoppers smell something appealing, they tend to think: "That smells good ... where is the smell coming from?" This can be applied to a variety of stores, such as a perfume shop or a retail store that sells freshly cooked bread. Retailers can use this tool to create a more comfortable, positive and inviting atmosphere, that not only makes a better shopping experience, but also tends to create repeat traffic. According to Carmine Santandrea, from Scent Andrea (a company that sells scents and displays for stores in America), stores "*have witnessed increases of people staying up to 20% longer on average*" and "*300% sales increases in particular products*" (Wilson, 2007, p.82).

Scent is a very important tool because it can become a part of the retailer's identity, a part of its brand. It has the potential to become the most powerful part of a brand because of the long memory associated with sense of smell. People often hear others saying of a certain fragrance, "I haven't smelled that since I was a kid," or "that brings back a fond memory."

The importance of odour as part of the store atmosphere has been object of some studies that cover the impact of those odours on the different aspects of the shopping experience.

Researchers have generally differentiated scents along three different, although not necessarily independent dimensions (Spangenberg et al., 1996). They include the affective quality of the scent (e.g., how pleasant it is), its arousing nature (e.g., how likely it is to evoke a physiological response), and its intensity (e.g., how strong it is).

As to the implications of ambient scent in the M-R model, prior research has failed to clearly measure scent presence effects on approach and avoidance behaviours. Ambient scent refers to the scent that does not start off from any particular object but is present in the environment. Research on ambient scent has been little, but may be of greater importance to retailers and other service providers than product-specific scents.

According to Mitchell et al (1995) pleasant ambient odours affect consumer decision making, depending if those scents are fitting or unfitting with the target product class. When ambient odour are fitting with the product class as opposed to unfitting, "*subjects spent more time processing the data, are more holistic in their processing, and are more likely to go*

beyond the information given, relying more on interferences and self-references" (Mitchell et al, 1995, p. 236)

In Spangenberg et al study (1996), findings show that there is a difference in evaluation and behaviour of shoppers in a scented store environment and an unscented store environment. In spite of this, the nature of the scent itself does not appear to as important as the presence of the scent itself. Although the scent did produce these enhanced perceptions, the specific scent used did not as well as its intensity, as long as within a reasonable range of intensity (as not to become hostile), did not dramatically affect the results.

Another conclusion of the same study was that shoppers in a scented atmosphere perceive that they had spent less time in the store than shoppers in the no-scent atmosphere, and the shoppers that are in a no-scent condition perceived having spent even significantly more time in the store than they actually did, thus suggesting that atmosphere scent may influence the way shoppers perceive the time spent in the store. Consequently, they identified scented atmosphere as a useful tool that managers may use to capture shopper's time and attention, increasing positive evaluations of the store's environment and merchandise, as well as to increase intentions to shop at specific stores.

The results of Matilla and Wirtz study (2001), showed that when the arousal levels of ambient scent and background music matched, consumers' evaluations of the shopping experience were enhanced (e.g., scenting the store with low an arousal scent, such as lavender, combined with slow tempo music led to higher evaluations than using that scent with high arousal music; playing fast tempo music had a more positive effect on approach behaviours when the store was scented with grapefruit, a high arousal scent, rather than with lavender). Furthermore, these authors point out that fitting aromas and music might encourage shoppers to engage in impulse buying. However, great care is needed to guarantee that the effects of different environmental stimuli match.

Anyway, the particular scent should be perceived as fitting for the retail store as a whole. As a result, changes in the service environment should not be carried out gradually but should be coordinated. Because the novelty and stimulus of a particular music and scent arrangement might wear off quite fast, retail stores that rely on heavy frequent-visit patterns might not be main candidates for these types of environmental manipulation.

On a study carried out by Chebat and Michon in 2003 in a mall setting, the authors concluded that ambient scent directly affects shoppers' perceptions of the mall, and thus having a very strong effect on the perceived product quality. Although its contribution is significant, the authors also point out that mood (i.e. pleasure and arousal) contributes very

little on the amount that clients spend, but may affect the cognitive processes of the environment.

Chebat and Michon (2003) could also confirm that the ambient scent should support the complete range of products in the store, since a close specific product-related scent may be quite effective to increase the sales of a specific product, but may cause a negative impact on sales of other products inside the store.

3.b.iii.2.3 LIGHTING

There have been very few studies covering the impact of lighting on store atmosphere, especially in the retail. The effect of lighting was studied by Baker et al (1992) and Park and Farr (2007). These investigations suggest that lighting can influence store image, examination and handling the merchandise. These studies lead us to opposing ends, since researches conclusions seem to be divided between them and not having one unique direction.

According to Kotler (1974), consumer's response covers "total product". This means that the different aspects of store atmosphere have specific roles among which the lighting is a significant component as it may or may not enhanced other aspects such as colours, displays, cleanliness, quality, product information accessibility, etc…

The result of the study made by Summers and Herbert (2001), points to the fact that supplemental lighting treatments had a positive effect on consumer behaviour. They could also find statistical significance on interactions between lighting and display (Summers and Herbert, 2001, p. 145).

Summers and Herbert's (2001) also point out that there may be a direct influence in consumers' approach behaviour caused by the contrast between supplemental merchandise lighting and ambient lighting as human visual systems are designed to react to changes in illumination within the visual field, and these changes may be thought of as contrasts.

Summers and Herbert's (2001), findings suggest "that a retailer's manipulation of the in-store supplemental display lighting may achieve a significant increase in general consumer involvement with in-store display merchandise" (Summers and Herbert, 2001, p.150).

Lighting conditions in a store can set the mood, tone, and pace of the service encounter (Lewinson, 1997). When the lights are low, consumers talk more softly, the service environment is perceived as more formal, and the pace of the encounter slows. By the contrary, brightly lit service environments are louder, communication exchanges among

customers and between customers and employees are more frequent, and the overall environment is perceived as more informal, exciting, and cheerful (Lewison, 1997).

3.b.iii.3 LAYOUT

The third set of atmospheric variables is **store layout**, which includes fixtures, floor space allocation, product groupings, traffic flow, department locations and locations within departments. Till today, only a few articles have been written regarding these variables.

Some of the environmental variables encountered by a customer in a retail store may have been specifically structured by the retailer to aid in the development of the store's image, either directly or indirectly by affecting consumers' inferences of product and/or service quality. One example of this is the macro design of the store, where the retailer defines what goes where in the physical space of the store. The way the store is organized and presented to the customer is one important aspect that the customer values, since it's critical that he can find what he's looking for at the store. Another example is the power aisle, or a single dominant aisle in a retail store characterized by mass displays of relatively large quantities of a relatively small number of SKUs (stock-keeping units), giving the customer an impression that the products are available at very low prices.

In 1964, Cox study results reject the hypothesis that impulse items respond more to variations in shelf space than do staples. Also, the author points out that, for many food products, increasing the amount of shelf space may be an inefficient way of increasing sales in supermarkets. From the retailer point of view, shelf allocation decisions may be influenced to minimize restraints such as out of stock policies, full-case stocking to minimize labour costs, or assortment policies of the retailer.

In Kotzan and Evanson (1969) study, the authors conclude that the assignment of the shelf facings was the most important factor affecting product sales, as well as that the manufacturer needs sufficient shelf facings, but not necessarily all possible shelf facings, to obtain maximum sales.

From the retailers' perspective, if sales increases obtained from increasing the shelf facing of significant products result in sales losses of other products, the net effect is a reallocation of sales. At this point, the retailer cannot change his total sales by manipulating shelf facings, but may maximize his profits by assigning maximum facings to the products with the greatest gross margins and greatest shelf facing effects.

Nevertheless, the retailer can increases shelf facings in private brand to increment sales, resulting in sales decreases of the manufacturers' brands. With this, the retailer actively pursues his strategy, and may use the power of shelf facings to accomplish these ends. Although, followed to an extreme, this strategy might result in retaliations from the manufacturers. A more rational retail strategy is to maximize the sales of both the dealers' and manufacturers' brands. The distribution of shelf space presents the retailer with a powerful area of authority and a consequent opportunity for financial gain from the intelligent management of shelf facings.

In 1970, another study by Cox shows that there is a relationship between the shelf space given to an impulse product that has high consumer acceptance and the total unit sales of that product brand. At the same time, the author also concludes that there is no relationship between the shelf space given to an impulse product that has low consumer acceptance and total unit sales of that product. Thus, retailers ought to restrict their shelf allocations for these brands to a minimal level.

In Curhan studies (1972, 1973 and 1974), the author points out that, at the retail level, operational reflections should be prior than merchandising considerations, such as high labour costs that require minimization of restocking costs and avoidance of stock-outs, before favouring particular products with additional space. However, the findings confirm the common business practice of allocating such space to private brand and impulse products.

In 1973, Curhan stated that the positive, but small, relationship between shelf space and unit sales is not uniform either among products or across stores or intra-store locations (within a particular store). Also, the author shows that impulse items are more responsive to space changes than are staples items and that manufacturer brands are less space elastic than their private brand. Thus, shelf spaces changes have a greater effect on faster-selling products than on slower-selling items. At the same time, Curhan points out that in general, shelf space changes seem to affect sales more in larger stores than in smaller ones.

On a study by Curhan in 1974, the results demonstrate that bonus space increases sales. Also, the study shows that slow-selling items are more prone to the effects of change in display space than are fast-selling items. Moreover, incremental space given to low-volume items may more frequently be perceived as unusual by shoppers and thus attract attention as evidence of promotion. At the same time, the effect of location quality is greater for high-priced and seasonal products and most likely not significant for low-priced and non-seasonal ones. The previous classes of products probably are not normally sought out by customers, and so may be expected to benefit from display exposure.

Iyer (1989) and Park et al (1989) examined the effects of store knowledge and time pressure on unplanned purchases, and concluded that unplanned purchases were higher when the costumer had a low level of knowledge of the store and no time pressure (Iyer, 1989) and that brand switching was more frequent with a low knowledge and customers shopped under pressure (Park et al, 1989).

Park et al (1989) studied the importance of the level of knowledge of the store and time available to shop. In this study, they define "store knowledge" as the information consumer has about a specific store's layout and floor configurations, including locations of products and brands, based on repetitive shopping experiences in that store; and "time available for shopping" as the consumers' perceptions of the time required to perform the intended shopping tasks relative to the actual time available to perform such tasks. In their findings, Park et al (1989) conclude that consumers' store knowledge and the time available for shopping affect various types of in-store shopping decisions and have an effect on levels of unplanned buying, brand switching due to difficulty in locating preferred brands/products, and the level of purchase volume reflection. A store's layout knowledge, regardless of time available for shopping, has a positive effect on absolute levels of brand/product switching. Also, time pressure mainly had an effect on frequency of failure to make intended purchases.

On the other hand, the authors found that increased levels of unplanned buying, minimization of purchase failure rates and postponement of purchase, and the improvement in the quality of purchase volume decisions are important factors that can contribute to increased store revenue. Therefore, the challenge facing store managers is to build up well planned strategies that facilitate these behaviours.

Increased time spent on search activities might reduce the time consumers can afford to spend on processing other in-store information, therefore maybe reducing levels of unplanned buying. Such increases in time pressure might have undesirable effects on other types of in-store buying behaviours (e.g. making intended purchases; purchase volume decisions). In order to avoid these potential downsides, a retailer may define a strategy, based on a coordinated approach to store environment, which considers in-store aisle and display configurations, product display arrangements, and in-store presentation of information. Such strategy may consider the aisles arrangement based on consumers' prior knowledge or expectations of product location, and combined displays of substitutable products to promote product level switching as opposed to purchase postponement when a favoured brand/product is out of stock.

Iyer's research (Iyer, 1989) supports the idea that the compliancy degree of the actual purchases with the programmed ones is a function of the shopper's knowledge of the store environment. At the same time, the author found evidence that unplanned purchases are related to knowledge of the store environment and time pressure. Furthermore, Iyer (1989) concluded that unplanned purchases were over and above routine purchases, which were fulfilled consistently.

On the other hand, Smith and Burns (1996) studied the use of a power aisle in a warehouse grocery store and found that a configuration of smaller number of products at larger quantities communicated lower prices than having a wider range of products with lower quantities. They also found that the presence of a power aisle in a retail store may stimulate consumers to classify the store as having discount prices. Smith and Burns (1996) findings also support that the number of SKUs and the quantities of those products included in a power aisle will affect consumers' price perceptions of those products. It seems that increasing the number of SKUs in a power aisle and reducing the quantity of each, may lead to a perception of higher prices of the products in that power aisle.

Furthermore, their findings suggest that an individual's perceptions of the products prices in the power aisle may easily change based on the store's present merchandising policies, even in regular customers that shop at least two times per month at the store.

"*Finally, these findings provide support to the contention that the consumers' process of encoding price information relies in part on the environmental cues which may present themselves in association with the product or products in question*" (Smith and Burns, 1996, p.12).

In 2007, Yildirim and Akalin-Baskaya studied the impact of different seating densities in a restaurant setting. They concluded that customers' perceptions of both densities were significantly different. According to their results, customers seem to have a more positive perception of moderate density of seating elements than to a higher one. Consequently, if the differences in seating element densities in a café/restaurant are taken into account, this can positively affect customers' choice of a particular café/restaurant.

3.b.iii.3.1 WAITING TIME

Although there is a lack of empirical studies around waiting cues in retail stores and its impact on consumer's behaviour, this variable is considered to be associated to store atmospherics, in the layout and design variables (Turley and Milliman, 2000, p.194).

Several other studies have found that perceived waiting time is negatively correlated with general satisfaction in scenarios as varied as airlines (Taylor 1994), restaurants (Jones and Peppiatt 1996), emergency healthcare (Dansky and Miles 1997), supermarkets (Tom and Lucey 1997), banks (Houston et al. 1998), general healthcare (Pruyn and Smidts 1998) and video rental stores (Evangelist et al. 2002). Given this, it is important to manage how long customers think they have been waiting, since the perceived waiting time may be very different from the real one.

Several factors have been revealed to reduce perceived waiting time, namely involving customers in the provision of the service, avoiding interruptions; giving estimates of the duration of a delay (Hui and Tse, 1996), giving people tasks to complete during a wait (Dansky and Miles 1997), providing entertainment (Jones and Peppiatt 1996), asking about customers' wellbeing, and lighter colours in the "cool" range of the spectrum (Gorn et al. 2004). Although these variables have been studied, the most frequently studied environmental variable in the marketing literature is atmospheric music. Unfortunately, research findings have been unclear as to whether music increases or decreases perceived duration. Likewise, results reveal that familiar music can either increase or decrease duration opinion compared to unfamiliar music, depending on whether individuals are monitoring the passage of time during the interval or not.

One of the studies that focused on perceived waiting time dates of 2003, by Grewal et al. Their study findings showed that "when customers perceive there are more (compared with fewer) employees visible in the store, their wait expectations are more positive" (Grewal et al, 2003, p. 265), since "customers believe that the employees will help them through the buying and checkout process. Customers have more negative expectations of the wait if they think the store is crowded" Grewal et al, 2003, p. 265). Thus, the study also proved that, when customers' wait expectations are negative, their evaluations of the store's atmosphere are lower.

On the other hand, Grewal et al also found that "wait expectations are a key determinant of store patronage, have both a negative indirect and a negative total effect on patronage intentions" (Grewal et al, 2003, p. 265). Customers are more likely to shop at a store and recommend it to friends if they do not expect to have to wait and like the store's atmosphere.

Also, Grewal *et al* (2003) found that men have more negative wait expectations than women. The results of their study suggest that managing wait expectations is particularly critical for male customers. *"Given the same environmental cues as women, men reacted more negatively in terms of wait expectations than did the women and thus were less likely to*

patronize the store. Retailers who target men should be aware that men may have a relatively strong negative reaction to even the expectation of waiting and attempt to find ways to manage expectations" (Grewal *et al*, 2003, p. 265).

In short, an increase in the amount of temporal information associated with an interval makes that interval seem longer. Anything that draws attention away from checking the passage of time will reduce the amount of temporal information available, and thus, decrease perceived duration. Some clichés such as "Time flies when you're having fun" (i.e., perceived duration contracts when you're not monitoring the passage of time) are a good example of this.

On their study, Kellaris *et al.* (1996) reported that estimated time was longer when music was louder versus softer. Also, Kellaris and Kent (1992) found that perceived time duration was longer when music was in a major key as opposite to a minor or atonal key. On the other hand, Hui *et al.* (1997) found that music likeability and estimated time were positively correlated. Yalch and Spangenberg (2000) reported that estimates of perceived duration were longer when respondents heard familiar rather than unfamiliar music.

As some examples of effective ways to minimize customers' perceived waiting time (Haynes 1990), we have queuing areas at banks providing television programming and promotional material to distract customers from thinking about the wait time and supermarkets display magazines and impulse products near check out areas to draw attention away from the expiration of time.

3.b.iii.4 DISPLAYS

Another variable of store atmospherics in a retail environment is the display type and the way they draw the customer's attention to a certain product or promotion by a specific text and/or location. This category of atmospheric stimulus is the general **interior displays**, which is composed by the product displays, point-of-.purchase display, posters, signs, cards, wall decorations, and other forms of interior signage and layout.

There have been several studies in this area, especially analysing the effects of shelf space (Cox, 1964; Kotzan and Evanson, 1969; Curhan, 1972, 1973 and 1974; Chevalier, 1975; Patton, 1981; Wilkinson et al, 1982 and Bawa et al, 1989). These authors had mixed conclusions regarding the effect of shelf space on sales, although generally found that a prominent display can significantly influence sales (Curhan, 1974; Chevalier, 1975 and

Wilkinson et al, 1982). Also, Curhan (1973) points out that this effect is neither uniform among products nor across stores or intra-store locations.

Studies that examined the effects of product displays have generally found that an outstanding display can significantly influence sales. The research on the effects of in-store signing tends to show that these signs can have an effect on retail shoppers. This is particularly true when signs are combined with sale price information (Chevalier, 1975; Woodside and Waddle, 1975) or a special display (Wilkinson et al, 1982). However, McKinnon et al (1981) found that benefit signs are better than price-only signs at both sale and regular price, and Patton (1981) reported that the amount of information in the sign can influence sales.

In 1974, Curhan studied actual shoppers and the influence of displays on the sales of fresh vegetables and fruits. Although this study was very product specific, there are some conclusions that are important to point out, such as sales of staples products responded more directly to advertising stimuli than do discretionary items. On the other hand, the reported effect of advertising was greater for high-priced products, but still positive for low-priced ones. Findings also corroborate that displays are an important factor for influencing sales of otherwise "invisible" low-volume products.

A study from Chevalier (1975) findings showed that, the increase in unit sales due to display did not come mainly from any substitution patterns, but seemed to be stolen from sales of the same product or of similar products in other stores or at other times, that is, the consumer only buys and stocks up on a displayed product because it is on display: if the product is not on display, the consumer might wait until a similar product is on display in another store. As a result, display sales are very volatile and are more related to between-store competition than to product substitution.

In that same year, yet on another study, Chevalier (1975) stated that product in growing categories increase their sales less than when displayed, than do product in mature phase categories. It was also found that the advertising to sales ratio in the product category had no impact on the effectiveness of displays.

However, competitive structure had an impact on the effectiveness of display with price reduction. "It appears that in competitive structure in which some products have similar positions and in which no one has a clear market share advantage, the average increase in sales, resulting from a display with price reduction, is higher than in competitive structures in which this is not the case" (Chevalier, 1975, p.430). This suggests that there is no price elasticity for individual items that are put on display and that consumers expect displays to

offer price reduced products and that they to not take the time to really compare prices. This may be a product of a tradition of low prices for displays guides' customers to believe that products on display are usually price reduced.

This means that a product which sells twice as much as another when on regular shelf layout should also sell twice as much when on display. In a low-movement product category, this produces a complicated problem for small market share brands, since they increase their sales by the same percentage as higher market share brands do, but their sales when displayed is not big enough to qualify their products for a full end display.

Another study by Woodside and Waddle (1975) showed that consumers did purchase more when the price was reduced than when the products were offered at the normal price. Also, when the consumer's attention was drawn to the product by a point-of-sale promotion, customers purchased more than when the price reduction was used with the point-of-sale promotion. In addition, when pricing remained normal, consumers purchased more when point-of-sale promotion was used. Therefore, a synergism was found when point-of-sales advertising and price special were combined.

In contrast to Woodside and Waddle (1975), in 1981 McKinnon et al (1981) results suggest that retail signing strategies should vary by pricing condition, and that descriptive benefit signs were more effective than price-only signs. These authors went further in research and studied the type of signing that was used and its influence on sales. By this, they concluded that the interaction of the type of sigh and the product used are not significant for any signing condition. On the other hand, the interaction between price condition and product is significant in all signing cases. These findings confirm that a sale price results in increased sales of the product despite of signing condition. Furthermore, McKinnon et al (1981) also concluded that, at a regular price, the addition of a price sign will not increase sales, but when the item is on sale, a price sign will increase sales. Then again, a benefit sign increased sales at both regular and sale conditions, but at a greater rate when the item is on sale. Therefore, a benefit sign is more effective than a price-only sign at both a regular and sale price.

In 1981, Patton findings suggest that consumers tend to choose and prefer brands that provide the most information, when faced with the task of choosing among a small number of brands in a situation in which each brand provides a different quantity of attribute information. This tendency is most evident when all brands within the product category are of equal quality, but it exists to a certain degree even when the brands are of unequal quality. At the same time, it doesn't seem to be any effect of display type on choice and preferences among equal quality brands.

A display containing only a limited quantity of relevant and representative information appears to produce the best decisions in terms of the quality of the product selected. By providing information regarding attributes on which the brand is inferior, manufacturers may positively influence consumer preferences for a brand, as long as they provide more information than does a superior competitor. Also, retailers may take advantage by using in-store displays with more information of store brands or brands with higher gross margins. It should be noted, however, that the effect of varying information can be removed if all competitors supply the same quantity of information.

Patton (1981) findings also suggest that public policy makers and others interested in consumer protection should consider the impact of total quantity of information provided to consumers, as well as the possibility that increased amounts of information may have damaging effects upon consumer brand choices.

Wilkinson et al (1982) research findings show that price reductions and changes in product display appear to be relatively more important than newspaper advertising for temporarily increasing unit sales of selected supermarket products. Also, the authors concluded that price reduction is significant as a main effect for products with increases in unit sales when price changes from regular to reduced. In this study, Wilkinson et al (1982) considered product display in three levels: normal display (regular shelf space), expanded display (double the regular shelf space allocation), and special display (regular shelf space allocation plus special end-of-aisle or within-aisle product arrangement). Last, but not least, Wilkinson et al (1982) findings show that price reductions and changes in display seams to be the best strategy for temporarily increasing unit sales of supermarket products than newspaper advertising. Of all the short-term strategies in study, in-store promotion in the form of special display (such as end-of-aisle or within-aisle display) proved to be the most efficient.

In 1989, Bawa et al, concluded that display and feature activity increases consumers' sensitivity to promotions and prices, and decreases brand loyalty. Concerning promotional strategy, their results suggest that "*promotions such as special displays and features are more likely to be effective in stores that carry a larger product assortment and that tend to use promotions more frequently*" (Bawa et al, 1989, p.494).

3.b.iii.5 HUMAN VARIABLES

The last but not least category of atmospheric variables is the **human variables**. This category includes variables such as customer density or crowding, privacy, customer

characteristics, personnel/employee characteristics, and employee uniforms. These human variables can be separated into two major groups: the influence of other shoppers on shopping behaviour and the influence of retail employees on shopping behaviour.

3.b.iii.5.1 CROWDING

The definition of crowded store differs from author to author. According to Stokols (1972), there are two components of crowding - physical condition (density) and experiential state (crowding). The first relates to the limited space for movement, while the second has to do with the individual perceptions of space limitations.

The physical density consists on the spatial limitations forced on the buyer by the physical structure and resources of the store and the existence of other shoppers. Potential measures of this variable embrace sales/time, transactions/time, and involuntary time delays both inside the store shopping area and at the checkout.

On the other hand, the psychological crowding can be defined as the shopper's perceptions of the conditioned aspects of limited space. Possible measures include the dimensions of spacious-confined, restricted-free to move and crowded-uncrowded.

According to Harrell and Hutt (1976, p. 38), psychological crowding include more than high density. Numerous personal factors may condition the degree to which crowding is perceived. The most important factors appear to be past experience, time awareness, and personality characteristics such as impatience and aggressiveness.

The challenge for any store manager is to increase the density of shoppers without reaching a determined experimental state, in which the shopper will feel uneased.

The fundamental concept of crowding is that each person has a psychological perception of crowding, which is a function of environmental variables that have different weights for each individual. According to Stokols's findings (1972), one of these variables is the difficulty of the task. Also, the fundamental environmental determinant for crowding is the occurrence of a high density of individuals per unit of space (e.g., per square meter).

In a retail store, a high density of people may condition mobility and the shopping efficiency. Thus, the time that the shopper takes in the store becomes important for him. Clearly, the shopper's perception of a situation is affected by the amount of stimulation from the physical and the social environment of the store. Crowding is most prominent when interference arises. A crowded feeling would be enhanced when limited or redirected

movement are due to the presence of other people, while high density situations that allow maximum freedom of movement would generate a less crowded perception.

By defining "being crowded" as "*receiving excessive stimulation from social sources*", Desor (1972, p. 79) has highlighted the interpersonal determinants of crowding.

As many things, crowding is a relative concept. Environments maybe considered more or less crowded depending on the anchor that the individual uses for comparison and judgement. As known, the psychological form of a person is mainly determined by the learning carried throughout his life. A shopper that lacks prior experience in shopping in a crowded environment or alternatively is under time pressure may be more sensitive to crowding. As an example of this, if a person that lives in the suburbs goes shopping at the city centre for the first time, it may feel a more intense crowding experience than someone that is used to such an environment.

When encountered with a crowding situation, the shopper may adapt different strategies to face it and minimize its impacts. First, the shopper may attempt to reduce the time spent at the store. Some shoppers may assign priorities to certain items, leaving the rest to future trips to the store, thus buying only the indispensable at that time. Clearly, a crowded store does not provide the perfect environment for a shopping decision to be made with carefulness and alternative evaluations, so a store in such situation may not be a good store for certain goods (such as a big investment buys, like a fridge or an air conditioning).

Crowding may also influence patterns of interpersonal communication inside the store. In order to take less time at the store, fewer special requests (e.g. meat cuts) may be made by shoppers. At the same time, they may also limit their personal contact down to the essential, by not communicating with family, friends or unnecessary store personnel during their shopping trip. The time spent inside the store and the pace at which the shopping is done may also contribute to reduce the level of communication with others. Traffic patterns within a crowded store are equivalent to those of a congested city. As in traffic, people tend do adapt their routes, directions and speed to the existent conditions at the store.

As consequences, crowding can affect the shopper's confidence, since it may condition the time and effectives of the shopping experience. Thus, the satisfaction derived from the purchase selection may be influenced by the conditions under which the shopper made its choices. Also, these conditions may influence the shopper's image of the store.

A buyer sensitive to the experiential state of crowding may employ in more extensive pre-planning in selecting a day and a time to shop at particular retail establishment.

According to Harrell and Hutt (1976, p. 39), a heavy concentration of shoppers may communicate a low price image more effectively than advertising. According to findings of Harrell, Hutt and Anderson (1980, p. 50), crowding in retail environments may have a predictable effect on shopping behaviour. The apparent effects of crowding on consumers' attitudes or feelings about a retail outlet are mediated by the adaptation strategies consumers' use. Thus, management may be able to enhance its store's image and consumer satisfaction by helping the consumer in adapting to crowding, an alternative to directly lessen physical density. Additionally, managers can begin to anticipate changes in consumer shopping patterns and processes under changing crowding conditions and adjust merchandising and promotion policies accordingly. Also, density alone does not suggest adaptation behaviours. Shoppers act only when they perceived crowding. Environmental designs can be created which provide for increased density but lessens the feeling of being crowded.

Eroglu and Machleit's study (1990) results point to a positive relationship between retail density conditions and retail crowding perceptions. These authors characterize task-oriented shoppers by a "*predetermined objective to complete a certain shopping task in a given time*" (Eroglu and Machleit, 1990, p.205), and non-task-oriented shoppers by carrying out a "*recreational or informative activity without any immediate interest in buying a product or service*" (Eroglu and Machleit, 1990, p.205). They found evidence of higher crowding experience and less satisfaction in shoppers that were task-oriented under high retail density conditions. At the same time, they also concluded that only shoppers under high retail density conditions had a higher crowding perception due to perceived risk and time pressure associated with the purchase. This study also found that higher retail density results in more intense retail crowding feeling.

In 1991, Hui and Bateson studied the perceived control role in the effects of consumer density and choice (whether it is a person's own decision to go into that particular store and to stay in it). These author's findings confirm the importance of these variables on the pleasantness of the service experience, and supports the power of the concept of the perceived control in explaining the effects of consumer choice and consumer density on the emotional and behavioural outcome of the service (Hui and Bateson, 1991, p.181). In the same study, the authors demonstrate that perceived control can help explaining consumers' reactions to high density in a service environment. Thus, a negative outcome of high density shoppers can be minimized by giving back some control to the client. More, Hui and Bateson (1991, p.182) results show that a greater degree of choice can lower the consumer's perceived crowding in the service encounter.

However, Hui and Bateson (1991, p.182) also conclude that the sign of the relationship between density and perceived control varies with the surrounding environment. In their study, they analyzed two different environments, a bank and a bar. In the bank setting, they concluded that high density was associated with lower perceived control, but in the bar setting, the results showed that high density was associated with higher control. Thus, density can directly influence pleasure in a negative manner, but can be counteracted by a positive association through perceived control.

According to Machleit et al (1994), perceived retail crowding has distinct human and spatial dimensions that effect satisfaction differently. In their study, findings also show that with regard to store satisfaction, the relationship between perceived retail crowding and satisfaction is not simple and direct. They also concluded that expectations of crowding can moderate the relationship such that increased feelings of crowding affect satisfaction only when the respondents expected the store to be less crowded than it actually was Machleit et al (1994, p.193) and point out that it is possible that there are other variables that affect the crowding satisfaction relationship.

Other studies have been made under the subject of crowding, that indicate that crowding has a negative relationship with browsing and comparison shopping, number of purchases, postponed shopping, going to another store, shopping excitement and quality perceptions (Wakefield and Blodgett, 1994).

In Grewal et al study (2003), the authors concluded that "perceptions of customer density had a negative effect on store atmosphere. In a service-intensive setting in which customers must have help from salespeople throughout the shopping process, customer density (or crowding) must be proactively managed" (Grewal et al, 2003, p.265).

According to Yildirim and Baskaya (2007), spatial factors can influence perceived crowding. Sinha et al (1995) found that people perceived less crowding with an open plan organization and side furniture arrangement. Floor height is another spatial factor that appears to have a relationship with perceived crowding (at higher floors crowding is perceived more). Yildrim and Baskaya (2007) also found other studies that look at crowding and gender, suggesting that males have the same amount of discomfort surrounded by males or females, while females report more discomfort when surrounded by males than other females (Rüstemli, 1991). Other study by Sinha and Mukherjee (1996) show that female roommates lead to larger personal space requirements and decreased tolerance for crowding.

Pons and Laroche (2007) looked into crowding and cross-cultural differences and pointed out that growing cross-cultural during service encounter and the globalizations of

services call for a better understanding of how culture impacts the way crowded setting are perceived and evaluated (Jamal, 2003). Pons and Laroche (2007) study suggest that expectations (through disconfirmation) play a major role in the way consumers evaluate crowded settings (Pons and Laroche, 2007, p.274). Also, it appears that consumer engage in a demand cognitive task when assessing their satisfaction with a crowded service situation. This has immediate managerial implications suggesting that overseeing expectations can be a solution to reduce dissatisfactions of consumers in crowded situations.

When comparing two different cultures (Mexican and Canadian), Pons and Laroche (2007) suggest that culture should be considered as a potential moderator to the retail crowding model, since its becoming critically important as diversity has revealed itself to several countries, in which consumer from all origins interact in the marketplace. Retailers need to know how to address cultural groups with different ways of dealing with crowded settings (Pons and Laroche, 2007, p.275).

In conclusion, crowding in retail shopping is an important environmental condition with implications for both the manager and the researcher. On one hand, high density is required to maintain profitability; on the other hand, perceived crowding may have adverse effects on the shopper's attitudes and buying behaviour.

3.b.iii.5.2 OTHER HUMAN VARIABLES OF STORE ATMOSPHERE

Another human variable relates to the **appearance of the retail personnel**, since it can be used to communicate a company's ideals and attributes to customers (Solomon, 1985). Baker et al (1992) studied the effects of social cues (number/friendliness of employees) and found that the more social cues present at the store, the higher the customer's arousal.

In 2000, Sharma and Stafford empirically demonstrated that salesperson credibility is affected by a set of store atmospheric cues, such as prestige or discount atmosphere; these atmospheric cues can lead to increased persuasion. Also, when customers received inconsistent atmosphere and salesperson availability cues, persuasion was enhanced, and salespeople availability had a different impact on diverse stores types.

The authors also concluded that, in general, retail salespeople working in "prestige ambience" stores were perceived to have higher levels of credibility when compared with salespeople working in "discount ambience" stores. This means that attention must be given to make sure that salesperson availability in prestige settings matches customer expectations; otherwise a potential credibility advantage of the prestige category will be degraded. In

matching conditions, customers use store atmospherics as the primary evaluative feature (instead of salespeople), and the most decisive factor in influencing people to buy is the "prestige store ambience."

Therefore, it seems that retail managers have at their disposal several potent tools to build better positions for their stores. In addition, a luxury retailer that maximizes customer involvement creates a unique experience for the luxury shopper, drawing out the desire to splurge. Appealing to emotion with nostalgia and ambition profiling, retailers provide uniqueness and individuality that contributes to a luxury atmosphere. By uniting atmosphere, design and merchandise, a retailer can create a unified story that sells to its customers on its luxury experience. This includes simple techniques such as selling from the side of the counter, not behind it. By envolving the customer, the luxury retailer also encourages loyalty.

In the end, luxury retail comes down to connecting with the customer, making them feel welcome, while accepting and understanding that luxury is a moving target is often the only way guaranteed to achieve the goal.

3b..iv MOST STUDIED DEPENDENT VARIABLES

Regarding the most studied dependent variables, **sales and time spent** at the store have been the top two variables. In many studied, authors found that atmospheric variables have some significant influence on consumer sales. The only exceptions were Smith and Curnow (1966) and Curhan (1972) studies about shelf space. Despite of these exceptions, it appears to be safe to state that various atmospheric variables have a strong influence on sales and consumer behaviour.

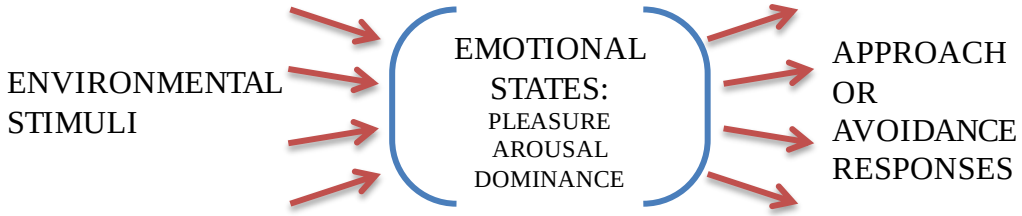
As to the time spent at the store, various studies have manipulated environmental variables and measured the time consumer spent or their perceptions of the time that they spent at the store. Smith and Curnow (1966) found that music volume influences time spent in the store, while Milliman (1982 and 1986) concluded that music tempo has an effect on time spent. Also, Yalch and Spangenberg (1990 and 1993) found that age mediated the effect of music style on time spent in the environment and Areni and Kim (1993) concluded that music style did not influence time.

Besides music, other variables that have a relationship with time spent in the store are colour (Bellizzi and Hite, 1992), and pleasure (Donovan et al, 1994). It appears that some environmental variables affect time perceptions, while others do not.

The third most studied dependent variable is **approach-avoidance behaviour**. Mehrabian and Russel (1974) stated that three emotional states intervene in approach-avoidance responses to an environment:

- pleasure: the degree to which a person feels happy or satisfied in a place;
- arousal: the degree of stimulation caused by an atmosphere;
- and dominance: the degree to which a person fees in control in a situation.

Figure 3. The Mehrabian-Russell Model (Donovan and Rossiter, 1982, p.42)



In 1982, Donovan and Rossiter found that dominance does not strongly affect in-store behaviour. Their results suggest that store atmosphere, created by the countless of in-store variables, is represented emotionally by consumers in terms of two major emotional states - pleasure and arousal, and that these two emotional states are significant mediators of intended shopping behaviours. On the other hand, Donovan and Rossiter (1982) study suggests that simple influence, or store-induced pleasure, is a very powerful determinant of approach-avoidance behaviour. Arousal can increase time spent in the store and also willingness to interact with sales personnel. In-store stimuli that induce arousal are quite easy to identify and almost certainly include bright lighting and upbeat music. However, as predicted by the M-R model, the incentives of arousal work positively only in store environments that are already pleasant; arousal-inducement may have no influence (or even a negative influence) in unpleasant store environments.

In 1992, Baker et al studied the M-R model and specifically, the effects of two retail atmospherics factors: ambient cues (lighting and music), and social cues (number/friendliness of employees) on respondent's pleasure, arousal and willingness to buy. Their results indicate that the ambient cues interact with the social cues to influence customer’s pleasure and the social cues influence arousal in the store environment. These affective states (pleasure and

arousal) were found to have a positive relationship with customer's willingness to buy. Furthermore, this study supports Donovan and Rossiter's (1982) findings that the M-R model is applicable to a retail setting. Also, the high social store environment (more employees on the floor, friendly employees) initiated greater feelings of arousal in customer's that did the low social store environment (one employee, ignoring customers).

Baker et al (1992) also concluded that interactive effects of the ambient and social factors on customer's pleasure indicate that when the social environment is low, the ambient factor becomes important. Likewise, when the ambient environment is low, the social factor becomes important. These results also suggest that creating a store environment that is high on one of these factors might be as good at providing a pleasurable shopping experience as creating one that is high on both factors.

Chebat et al (1995) study results confirms that both mood and attribution process influence the evaluation of service quality: the higher the consumers' pleasure, the higher the assessment of service quality; the more external and the less stable the cause of the service interruption, the better the perceived service quality. Also, their findings show that pleasure has impact on the two dimensions of service quality (i.e. personnel's empathy and assurance) and mood does not affect services' reliability, tangibility, and reaction. On the other hand, consumers' mood seems to affect the interpersonal aspect of the service encounter.

Consumers are not passively observing the service delivery process; they search for the causes of incidents and for the stability of those causes and may be tolerant if the incidents are not under the control or the responsibility of employees and/or if the incidents are not recurrent. "*Consumers are basically assuming that the cause of the service "incident" is human because they see mainly human actors, (i.e. the employees); they do not necessarily conceive an abstract cause, such as the "organization" or the "production system""* (Chebat et al, 1995, p. 195).

In Sherman et al. (1997) study the authors established that pleasure and arousal have a positive impact on money spent, while time spent in the store is solely influenced by the consumer's arousal level.

More recently, Mattila and Wirtz (2001) study concluded that the addition of pleasant environmental cues enhances the shopping experience and, more significantly, that such environmental stimuli should not be considered by themselves, since it is the total configuration of cues that influence consumer responses. They also demonstrated that the arousing quality of pleasant stimuli is where these holistic evaluations occur. When the environment is perceived as a whole, but the customer can sense specific arousing dimensions

from environmental stimuli, then different combinations of atmospheric cues might produce differential responses.

Besides these authors, some others studied this model and its relationship with other atmospheric variables. An example of this is a study written in 1991 by Hui and Bateson that found that dominance is correlated with pleasure and personal control and is negatively correlated with crowding. Also, approach-avoidance studies were examined responses to colour (Bellizzi et al, 1983, Bellizzi and Hite, 1992); music, lighting, and retail salespeople (Baker et al, 1992). In a general matter, it clearly appears that retail environmental variables have a strong influence on consumer's approach-avoidance behaviour.

Another result of atmospheric conditions is the achieved **store image**. As defined by Martineau (1957) retail image is "the way in which a retailer is defined in a shoppers mind, partly by its functional qualities and partly by an aura of psychological attributes" (Martineau, 1957, p.47).

In 1986, Mazursky and Jacoby study suggest that subjects rely on different sets of objective cues to infer different image aspects. Also, in evaluating the quality of service, the number of salespersons per department appeared to be the most important cue.

Zimmer and Golden (1986) also studied retail image. According to them, the image of a store consists of the way it is perceived by consumers. The merchandise, whether seen as favourable or unfavourable, appears to project an image not only of itself but also of the store as a whole. Their study has demonstrated that consumer's think of retail store image in terms of specific store attributes (price, service, layout, etc.) and overall impressions (like, very good, in trouble, ungraded, etc.). Zimmer and Golden (1986) results suggest the possibility that, in the formation of image or at least in memory storage, influence is an essential part of image perceptions.

Later, in 1996, Joyce and Lambert found that shopper age significantly affects perceptions of store image and that younger consumers feel more positive about both store characteristics and salesperson attributes than do older shoppers. Thus, the evaluations on merchandise quality, selection, salesperson helpfulness, service quality, salesperson courteousness, overall store impression, salesperson friendliness, and likelihood of shopping at the store frequently were lower from older consumers' evaluations than younger consumers'. Furthermore, this condition was obtained across store formats and no differences between the genders were found.

3b..v PATRONAGE

An understanding of patronage behaviour is a critical issue for retail managers because it enables them to identify and target those consumers most likely to purchase. Unfortunately, little comprehensive work has attempted to assess the general findings across academic studies.

Throughout time, retailers have tracked, scanned, monitored, and followed consumers' shopping behaviour. Questions such as how shoppers choose a particular store, how often they visit it, why they visit it, and who visits have been popular subjects for research.

A retailer can improve consumer patronage behaviour by identifying and implementing an appropriate marketing strategy, which should start with a good understanding of the countless factors and dimensions that influence shoppers' choice behaviour (e.g., to increase initial patronage, consumer promotions should centre on store and product specific elements, such as wide assortment, service and pleasant in-store decor). On the other hand, managers must recognize that they should tailor their marketing strategies to frequent shoppers, which will increase the probability that they experience positive returns from their promotional investment, once shopping frequencies tend to be related with shopper characteristics.

Keng and Ehrenberg study (1984) findings show that store loyalty exists, but is not strong or exclusive. "If over time a consumer fairly regularly buys different brands at different chains, it is unlikely that there is a simple answer to the traditional question about consumers' store and brand choice, namely to what extend consumers first decide on a store to visit and then on a brand to buy, or vice versa" (Keng and Ehrenberg, 1984, p.406).

Consumers' relatively low loyalty to a particular chain cannot be considered as a failure by that retailer to satisfy the customer, since in our days all store groups follow the same communication strategy pattern. Keng and Ehrenberg study (1984) also found evidence that brand loyalty to a store is positive but low, since customers also purchase among other brands and stores, loyalty to retailers' own-label is much similar to loyalty to manufacturers' brands, and repeat buying and penetration growth of a brand within a chain or store group follows the same patterns as in general population.

In 1990, Dawson et al, defines retail patronage as "*a long-term purchase relationship, between the consumer and a particular store*" (Dawson et al, 1990, p. 408). In their study, the authors findings showed that consumers with strong product reasons are significantly more

likely to purchase or intend to purchase while at the store, although consumers with strong experiential reasons are significantly less likely to do so.

According to Bitner (1992), it is by understanding the customer's attribution process that there is room for turning a disappointing shopping experience into a more satisfying one. Furthermore, this study also showed "*that providing customers with logical explanations for service failures and compensating them in some way can mitigate dissatisfaction*" (Bitner, 1992, p.79). On the other hand, Bitner (1992) experimental results also showed that nonverbal cues such as the store's physical appearance can influence customer attributions and satisfaction in a service failure context. Therefore, attention to the symbolic meaning of nonverbal messages may also play a key role in the overall enhancement of the service encounter evaluations. On a concluding note, Bitner (1992) points out that a high level of perceived service quality will lead to service loyalty, as well as that the level of satisfaction in the service encounters results from a very rational, cognitive sequence.

Babin and Darden (1996) study "results suggest that a negative mood among shoppers, although not affecting spending, reduces patron satisfaction significantly more than a positive mood increases it" (Babin and Darden, 1996, p.204). This study also suggests that the in-store emotional state of consumers not only influences spending, but also has a substantial impact on customers' perceptions of satisfaction with a retailer.

In 1998, in a study by Sirohi et al, the authors conclude that service quality is the most critical determinant of merchandise quality perception. *Perceived value for money depends on perceived relative price and sales promotion perceptions and to a lesser extent on service quality and merchandise quality perceptions. Store loyalty intentions, measured by intent to continue shopping, intent to increase purchases and intent to recommend the store depend on service quality and merchandise quality perception* (Sirohi et al, 1998, p.223). According to Sirohi et al (1998), the three measures for the construct of store loyalty intentions of existing customers' are: willingness to repurchase, willingness to purchase more in the future, and willingness to recommend the store to others, and with enhanced loyalty the established practice of offering costly loss in leader products to generate store traffic may become less necessary.

Also, when stores are operating in highly competitive local retail environments, perception of value may become a more important factor in determining store loyalty intentions than in stores operating in less competitive local retail environments.

Sivadas and Baker-Prewitt (2000) study findings show that service quality has a positive effect on satisfaction, on likelihood of recommending the store to others, and on favourable relative attitude.

In 2002, Baker et al research concluded that "interpersonal service quality, merchandise value, time/ effort costs, and psychic costs - significantly influence patronage intentions (…) perceived merchandise value and psychic costs are particularly strong determinants of patronage intentions" (Baker et al, 2002, p.138).

Only last year, Pan and Zinkhan (2006) carried out a study that conducted a meta-analysis of empirical findings on the predictors of retail patronage. These authors were able to determine that, from a set of sixteen predictor variables of retail patronage, "*selection has the highest average correlation with store choice, followed by service, quality, store atmosphere, low price levels, convenient location, fast checkout, convenient opening hours, friendliness of salespeople, and convenient parking facilities*" (Pan and Zinkhan, 2006, p.238). Other antecedent variables (e.g., store image, store attitude, gender) were found to be important predictors of shopping frequencies, though the effect sizes of some variables (e.g., age, income) were found to be insignificant. The author also established that "*gender is the only successful demographic variable, which suggests that women tend to be more frequent shoppers than men*" (Pan and Zinkhan, 2006, p.238).

Pan and Zinkhan (2006) also found that personal factors (e.g., demographics, attitude toward a store) appear to be the dominant predictors of shopping frequencies, while market and product pertinent variables are more likely to influence shoppers' decisions to patronize a particular store, given the availability of a variety of stores. Thus, they suggest that retailers have different available tools (e.g., greater assortment, low prices) to manipulate shoppers' intention to patronize their stores. Yet, shopping frequency, a variable which retailers have little control over, mostly depends on a consumer's will.

For traditional retailers, the factors that can make or break a store are physical location, parking facilities, checkout speed, and store atmosphere. Still, with the evolution of non-store retailing formats (e.g., e-commerce), these important predictors of retail patronage may grow to be less decisive or obsolete. This new trend may breed a new generation of shoppers that may give more importance to other factors (e.g., company reputation and return policy) in their patronize decision to a non-store retailer.

Pan and Zinkhan (2006) findings also showed that a wide selection of products/service, and product quality are especially important for explaining retail choice.

3b..vi LIMITATIONS AND GAPS OF CURRENT RESEARCH

This section aims to explore some limitations and gaps of the current literary review, and to point out some future approaches of research on store atmospherics.

3.b.vi.1 LIMITATIONS

As for limitations of the literary review made previously on store atmospherics, we can point out that:

- Many of the existing research was made based on samples consisted on university students and not on actual shoppers. As examples of this we have Donovan and Rossiter (1982); Mazursky and Jacoby (1986); Baker et al (1992); Bellizi and Hite (1992); Ward et al (1992); Chebat et al (1995); Dubé et al (1995); Mitchell et al (1995); Grewal et al (2003), amongst others;

- Some of the existing studies were made on non-retailing sets or in specific retail stores, and not on supermarkets or hypermarkets, which are the formats that are most predominant in retail sales today. Milliman's study (1986) is an example of this limitation, since its conclusions were made from a restaurant set; Yalch and Spangenberg study from 1990 was also made in a non-food retail set, since it two men's department stores were studied; other examples are Areni and Kim (1993) study made in a wine store; Greenland and McGoldrick (1994), were a bank was the set of the study; and Hirsch (1995) study on a Las Vegas casino;

- Most of the existing academic studies were made with samples from the USA. As examples of this we have Chevalier studies (1975); Patton (1981); Milliman (1982); Wilkinson et al (1982); Bellizzi et al (1983); Bawa et al (1989); Dawson et al (1990); Bitner (1990); Ward et al (1992); Hirsh (1995); Mitchell et al (1995); Baker et al (2002); and Grewal et al (2003).

Few studies have been made in other countries, and many of these were made in Canada – Dubé et al (1995), Hui et al (1997), Chebat et al (1999), Chebat et Michon (2003), Pons and Laroche (2007), Chebat et Morrin (2007). Dixon et al (2005); Beverland et al (2006) studies were conducted in Australia, while in Europe we can name Keng and Ehrenberg (1984) and Hui and Bateson (1991 and 1992) in the UK; Spies et al (1997) in Germany; Yildirim and Akalin-Baskaya (2007) in Turkey.

- Another limitation of this literary review is that many of the studies made were focused on only one specific variable of the store atmosphere. As examples, we have studies focused on music: Milliman (1982 and 1986); Yalch and Spangenberg (1990); Hui et al (1997); Chebat et al (2001); Beverland et al (2006);

- We could find two studies that did a cross-cultural approach to the perceptions of the customer on crowding (Pons and Larroche, 2007) and colour (Chebat et Morrin, 2007). Besides these studies, no other study was found to compare the effects of atmospheric variables in different cultures.

3.b.vi.2 GAPS

Considering a gap as some topic or area where no studies have been found to exist and that are pertinent enough to justify such study, we found the following gaps in the existing literature review on store atmosphere:

- No studies which research was made directly in contact with customers was found within Europe. Only one study – Keng and Ehrenberg (1984) – was found to be made in a consumer panel of retail store customers, but not directly with them. This is clearly a lack of research that needs to be filled;

- There are several geographic areas where no studies of store atmosphere were found. These include South America, Africa, Asia and all Latin countries. These gaps must be filled in order for researches to be able to assess if a global response to the atmospheric variables exist or if, in contrast, different cultures react in different ways to similar conditions. If this last hypothesis is confirmed, then it will have an impact on multinational and global marketing management, since adaptations need to be made in order for the company to succeed in all its target markets;

- Regarding the market which we will focus on (Portugal), we found no studies made in this country;

- Regarding comparisons of store types, we found no studies that studied and compared the impact of store atmospheric variables in different store formats. This gains some importance, since in nowadays many different retail formats co-exist at the same market (e.g., in Portugal, we have hypermarkets such as Continente, Jumbo and Feira Nova; supermarkets such as, Modelo Bonjour; soft discounters such as Pingo Doce; hard discounters such as Lidl; cash and carrys such as Makro; and so on). In these cases, a company that may have different

banners needs to know if different approaches need to be done in order to captures the most attention of its customers. For this, this gap in the existing studies must be filled;

- There are several atmospheric variables that we found no studies about and that are key components of the assessment of the quality of the service of the stores. These include temperature and cleanliness, which transmit comfort feeling to the customer;

- Although the research to date has isolated the effects of particular environmental stimuli, there is not much understanding of which elements in the retail atmosphere are most salient to consumers when forming an approach-avoidance evaluation;

- Another gap in current research is how the retail environment can be used as a segmentation tool. Research in this area has shown that consumers of different ages react differently to music in retail environments (Yalch and Spangenberg, 1988, 1990), but other segmentation variables also need to be studied to see if other segmentation variables mediate the effect of the retail environment;

- There is also a need for a more "macro" level theory that would explain how consumers process the whole atmosphere, which can often send competing or deviant signals, and form some evaluation of it;

- Although retailers design different retail environments for different types of consumers, the published work in this area has not explored how the atmosphere should be manipulated or developed for different market segments;

- Although Bellizzi et al (1983) and Bellizzi and Hite (1992) found that colour influenced the behaviour of retail shoppers; these investigations took place in a simulated environment by using laboratory designs. We found no published empirical work using various floor coverings as the independent variable;

- No studies were found to have explored the effects of more recent technological innovations, such as teletext and interactive displays, on sales and time spent at the store.

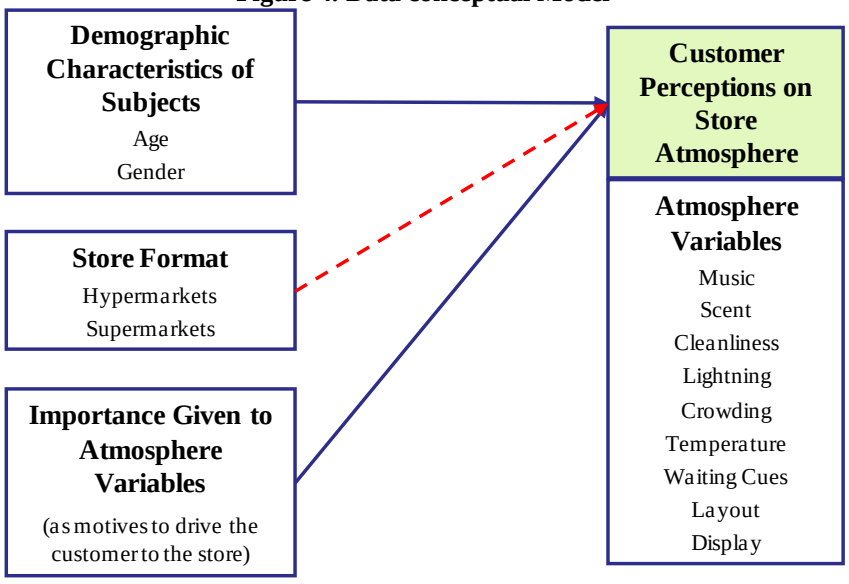
4. FIELD STUDY

4.a CONCEPTUAL MODEL

The present study aims to compare client perceptions on several aspects of store atmosphere, in similar atmospheric strategic conditions, but of different store formats.

In the figure bellow we schematized data under analysis and the connections between the several groups of information. In red, we point out the general hypotheses that will be tested detailed by each of the atmosphere variables indicated, as we will analyse if store format has influence on customer's perceptions. Although the main focus of our study is to try to find a relationship between store format and customer's perceptions of various store atmosphere variables, we may also use the data in hand to test if age and gender also have any relationship with customer perceptions on store atmosphere.

Figure 4. Data conceptual Model



Since the aim of the study is to compare consumer's perceptions of several atmospheric variables in different store format, we need to limit the study to variables that do not depend on store format (such as range of products).

Because several hypermarket stores in Portugal are located inside of shopping malls, all exterior atmospheric variables were also excluded from the list of possible variables to analyse.

At the same time, since the stores in study have different sizes and layouts, all variables regarding these criteria were also eliminated.

Dependent Variable

Given that the purpose of this study is to analyse if different atmospheric variables have the same impact on customer's perceptions, regardless of store format, the main dependent variable of the study is Customer Perception.

Independent Variables

Since **Age** and **Gender** may influence some of the perceptions that a customer might infer from the store environment, these are considered as independent variables for the forward analysis.

As pointed out previously, the aim of the study is to find out if the **Store Format** has influence on the customer perceptions of the store atmosphere, thus Store Format (hyper or supermarket) is a fundamental independent variable.

The hypotheses that derive from these three variables will be originated from the ones defined next.

Music

All Modelo Continente stores receive marketing guidelines regarding several issues, including the type and volume of music that the store should have. The music that the stores play is supplied by NFM, a company that produces a mix of songs and commercial spots of Modelo Continente promotions and services. The commercial spots are played two times per hour, and the rest of the time, national and international pop music is played.

But, do these guidelines have different effects on clients, depending on store format? Does music and volume that is played at have different effects on consumer opinion, depending on store format? From these questions, hypotheses arise:

H1 – the customer's perception of the existence of background music is the same, regardless of store format

Scent and Cleanliness

One of the directives that Modelo Continente spreads out to its stores is that the store should always present itself to customers in a clean and organized manner. Since smaller stores have less human resources (as smaller, the less personnel is required), this does not mean that the stores aren't clean and organized as the bigger ones. But, does the store size influence cleanliness alertness and scent awareness? Some people may associate smaller spaces to darker and unpleasant places. But does this really happen in store format? Therefore,

H2 – the customer's perception of the existence of a pleasant/fresh scent at the store is the same, regardless of the store format

H3 – the customer's perception of the cleanliness and tidiness of the store is the same, regardless of the store format

H4 – H2 has a positive correlation with H3

Lighting

It is common to say a smaller space or a corner is darker and hidden from the main source of lighting. But does this assumption have the same effect on a retail store? Does lighting have different results in consumer perception in different store formats? Are smaller stores in need of more lighting?

H5 – the existence of adequate lighting at the store is the same, regardless of the store format

Temperature

Does the store format, therefore, store size, have a negative influence on consumer perception when it comes to the temperature of the atmosphere? Are customers cold when they get to the refrigerated areas of the store? Does the customer have the same perception to changes in ambience temperature in different store formats? Are smaller places associated to hotter and unpleasant ones?

H6 – the existence of adequate temperature inside the store is the same, regardless of the store format

Layout and Displays

Does a larger store have a negative impact on the ability of the customer to find what they are searching for? Is it easier for clients to shop at a local, smaller store? Is the promotional identification as easy in all store formats or does these variables differ depending on format?

H7 – the customer's perception of the clear identification of product categories and information in the shelves is the same, regardless of the store format

Waiting cues

Although different store sizes mean different needs regarding human resources (employees), the customer waiting time expectations does not vary as such. Do waiting cues have the same effect on consumer satisfaction in different store formats? Does this satisfaction level vary between the checkout waiting cue and the counter service cue?

H8 – the customer's perception of waiting time in the store is the same, regardless of the store format

Crowding

Do smaller stores, that usually have less free space for clients to circulate, have a different impact on consumer perception when it comes to circulation and traffic flow?

H9 – the customer's perception of number of customers at the store is the same, regardless of the store format

General Evaluation

Do people make the similar evaluation of store environment, regardless of the store format? Does size really matter in retail management?

H10 – the customer's perception on the global store environment is the same, regardless of the store format

Besides these previous hypotheses, others arise from the literature review on the first part of this paper:

According to some of the authors that studied the effect of music on consumer's behaviour (Smith and Curnow, 1966; Milliman, 1982 and Yalch and Spangenberg, 1990) we can state the following hypotheses:

Ha – The volume at which the background music is played has a positive correlation with the pleasantness perception of the music

Hb – The awareness of the existence of music has a positive correlation with the intention of the customer to return to the store

Hc - The awareness of the existence of music has a positive correlation with the overall perception of the store environment

Also, as pointed out previously, Hui et al (1997) studied the relationship between likeliness of the background music and consumer satisfaction. Thus, we can infer from their conclusions the next hypotheses:

Hd – the pleasantness perception of the music that is played in the store has a positive correlation with the intention of the customer to return to the store

He – the pleasantness perception of the music that is played in the store has a positive correlation with the level of intension to recommend the store to family and friend

Hf1 – the pleasantness perception of the music that is played in the store has a positive correlation with the level of agreement that the waiting time to be attended at the service counter in the store is reasonable

Hf2 – the pleasantness perception of the music that is played in the store has a positive correlation with the level of agreement that the waiting time to be attended at the checkouts of the store is reasonable

Still in the music area, Kellaris et al (1996) studied the relationship between the volume of music and the perceived waiting times. As such:

Hg1 – The volume at which the background music is played has a positive correlation with the level of agreement that the waiting time to be attended at the service counter in the store is reasonable.

Hg2 – The volume at which the background music is played has a positive correlation with the level of agreement that the waiting time to be attended at the checkouts of the store is reasonable

In 2005, an anonymous author reported that 90% of a study's subjects pointed out cleanliness as the most important element in deciding where to shop (Anonymous, 2005). Therefore:

Hh – there is a high or very high degree of importance attributed by the customer to a pleasant clean and hygienic environment

Since Baker et al (1992) and Summers and Herbert (2001) concluded that lighting had a relationship with arousal and on consumer behaviour, we can infer that lighting may have a relationship with patronage and overall perception of the atmosphere:

Hi1 – the level of agreement that the store's lighting in the fresh good areas allows the customer to evaluate the quality of the products has a positive correlation with the intention of the customer to return to the store

Hi2 – the level of agreement that the store's light at the stores corners is sufficient has a positive correlation with the intention of the customer to return to the store

Hi3 – the level of agreement that the store's general lighting is sufficient has a positive correlation with the intention of the customer to return to the store

Hj1 – the level of agreement that the store's lighting in the fresh good areas allows the customer to evaluate the quality of the products has a positive correlation with the overall perception of the store environment

Hj2 – the level of agreement that the store's light at the stores corners is sufficient has a positive correlation with the overall perception of the store environment

Hj3 – the level of agreement that the store's general lighting is sufficient has a positive correlation with the overall perception of the store environment

Harrell and Hutt (1976) point out that there may be a relationship between the liberty of movement and the perceived crowding. Therefore, we may state that:

Hk – the level of agreement that the store corridors are spacious and allow a good circulation has a positive correlation with the level of agreement that the number of customers at the store on moments of higher customer flow is reasonable

In 2003, Grewal et al studied the relationship between the customer's wait expectations in a crowded situation and store patronage and recommendation. Thus, we may hypothesize that:

Hl1 – the level of agreement that the waiting time to be attended at the service counter in the store is reasonable has a positive correlation with the level of agreement that the customer can find a store employee when help is needed

Hl2 – the level of agreement that the waiting time to be attended at the checkout is reasonable has a positive correlation with the level of agreement that the customer can find a store employee when help is needed

Hl3 – the level of agreement that the waiting time to be attended at the service counter in the store is reasonable has a positive correlation with the level of agreement that the number of customers at the store on moments of higher customer flow is reasonable

Hl4 – the level of agreement that the waiting time to be attended at the checkout is reasonable has a positive correlation with the level of agreement that the number of customers at the store on moments of higher customer flow is reasonable

Hm1 – the level of agreement that the waiting time to be attended at the service counter in the store is reasonable has a positive correlation with the intention of the customer to return to the store

Hm2 – the level of agreement that the waiting time to be attended at the checkout is reasonable has a positive correlation with the intention of the customer to return to the store

Hn1 – the level of agreement that the waiting time to be attended at the service counter in the store is reasonable has a positive correlation with the level of intension to recommend the store to family and friends

Hn2 – the level of agreement that the waiting time to be attended at the checkout is reasonable has a positive correlation with the level of intension to recommend the store to family and friends

In 1992, Baker et al concluded that there is a relationship between the amount of social cues (employees present at the store) and the customer arousal. Therefore, we may state that the easiness to find a employee is related to the patronage and overall perception of the environment:

Ho1 – the level of agreement that the customer can find a store employee when help is needed has a positive correlation with the intention of the customer to return to the store

Ho2 – the level of agreement that the customer can find a store employee when help is needed has a positive correlation with the overall perception of the store environment

Eroglu and Machleit (1990) and Harrell et al (1980) established a negative relationship between crowding and customer's satisfaction. Given this, we can hypothesis that:

Hp1 – the level of agreement that the number of customers at the store on moments of higher customer flow is reasonable has a negative correlation with the intention of the customer to return to the store

Hp2 – the level of agreement that the number of customers at the store on moments of higher customer flow is reasonable has a negative correlation with the level of intension to recommend the store to family and friends

Hp3 – the level of agreement that the number of customers at the store on moments of higher customer flow is reasonable has a negative correlation with the overall perception of the store environment

4.b SAMPLE

Since the leader for the Portuguese retail market has been established for several years, it seemed logical and natural that the chosen field study site should be at Modelo Continente Hipermercados, S.A. stores.

Characterization of Modelo Continente Hipermercados, S.A.

Modelo Continente is the sub-holding of the Sonae Group in the retail sector and has become a benchmark reference in the retail market, after having revolutionized the consumer habits and commercial landscape in Portugal with the opening of the first hypermarket in the country, in 1985.

Sonae is the biggest private Portuguese group, with interests in a broad range of businesses: food and non food retail, building and management of shopping centres, fixed and mobile telecommunications, media and new technologies, as well as tourism, logistics and insurance, among others. Sonae Group operates in eight countries, with a consolidated turnover of around 6,392 million euro (www.sonae.pt).

Sonae's global strategy has been focused on two main streams. The first one is to consolidate Modelo Continente's dominant position in core markets, i.e. food retail. This stream's has been defined with three key elements: to maintain the market leadership through

a strong organic growth, maximizing benefits of the already existing store network and continuous investment in its modernizations, reinforcing the "value-for-money" positioning on food formats and developing specialist profiles for non food formats. The second element of the first stream is to implement best practices by increasing operational efficiency, namely through full use of the category management model, targeting information systems and human resources development and empower innovative attitudes. Finally, the third element is to keep a customer focus, by turning the costumer relationship into a competitive advantage. The second stream of Sonae's strategy is to expand the business frontiers, by taking advantage of developed resources and competencies.

As Portugal's biggest private employer, Modelo Continente invests strongly in its human capital, promoting a business culture of leadership, readiness for change, loyalty, rigor ad transparency.

Aware of its important social responsibilities, Modelo Continente promotes a responsible and proactive attitude in the area of social and environmental awareness, developing real programs and initiatives to protect the environment and support the community.

For over 20 years, Modelo Continente has continuously strengthened links with its customers, presenting a quality and diverse offer at accessible prices. Today, the company is present across the entire country, with a wide portfolio of food and non food formats with different degrees of maturity.

In food retail, Modelo Continente is market leader with three distinct formats that offer a varied range of superior quality products at the best prices. These formats are Continente, Modelo (both hypermarkets) and Modelo Bonjour (supermarkets).

In non food retail, Modelo Continente has six brands that have benchmark positions in their respective market segments. The well differentiated offer covers clothing (Modalfa and Zippy Kidstore), sports goods (Sportzone), DIY and construction (Maxmat), computing (Vobis), white goods and consumer electronics (Worten and Worten Mobile), travels (Star), and pharmaceuticals (Área Saúde).

Focusing on the formats within our study interest, the food formats, a small description of each format is given as follows.

Continente was the first chain of hypermarkets in Portugal and today is still a benchmark reference in food retail in the country. Its stores are mainly located in big shopping centres in the main cities in Portugal and have an average surface of 9.000 square meters.

The brand is positioned to offer highly competitive prices together with wide product choice, customer care and other services with a strong sales promotional predisposition, enabling it to offer value for money that is appreciated and well known by the Portuguese consumer. The sustained growth path of the company over the last twenty years, with constant high impact, innovative social and promotional actions, has won the confidence and recognition of the Portuguese by being recognized as the retail brand which the Portuguese people trust most.

Picture 1. Continente Store Photographs

The Modelo chain is composed by mini-hypermarkets of 2.000 square meters in medium sized urban centres. With a strong focus on food and perishable products, the stores combine proximity with variety and competitive prices.

Since Modelo stores are located in shopping galleries that have a complementary offer of clothing, white goods and consumer electronics, as well as small services such as dry

cleaning, and photo printing and developing, they serve as catalysts for very attractive commercial areas.

The brand has established close links with local communities, through organising events and initiatives that aim at making a contribution to significant social and environment projects.

Picture 2. Modelo Store Photographs

Modelo Bonjour brand is made up of supermarkets with around 800 square meters located in the metropolitan areas of Lisbon and Porto. It is the brand of convenience and proximity, particularly suitable for day-by-day, frequent purchases. As such, it is mainly a food retail chain, located principally in residential areas, and with extended opening hours, including Sundays and public holidays.

Picture 3. Modelo Bonjour Store Photographs

4b..i SAMPLE CHOICE

Keeping in mind that Modelo Continente has three formats of food retail stores and that the field study must be made in Lisbon area (for logistical reasons), this allowed to restring the choice of the sample to two dozen stores (from a total of nearly 140).

Secondly, the criteria used for store elimination, was the physical location of the store, excluding all stores that are not located in the Lisbon city area.

These criteria lead us to the following stores:

- from Continente format – Vasco da Gama and Colombo
- from Modelo format – no stores are located in the Lisbon city area
- from Modelo Bonjour format – five stores were selected (Campo Grande, Benfica, Quinta do Lambert, Saldanha, and Santa Quitéria)

Although these criteria exclude stores from the Modelo format, this is not considered prejudicial for this study, since the two remaining formats are the most extreme ones (Hypermarkets and small Supermarkets).

Even though in the same format, Continente of Colombo is twice the size of Vasco da Gama's store. The first one is around 15.000 square meters, while the second is about 7.500 square meters. These are also two of the most different extreme cases from all of the Continente stores, when it comes to store size.

At the same time, not all of the Modelo Bonjour stores chosen for the study are identical in size. The biggest one from the five stores is Quinta do Lambert, with around 900 square meters, and located inside a small mall, followed by Campo Grande and Benfica stores, the first with around 760 square meters and the second with 700 square meters, and Santa Quitéria and Saldanha both with around 600 square meters, being the smallest the store in Santa Quitéria.

All of these stores have been inaugurated between January 1997 and November 2003, so none of these is very recent and new, neither very old and in need of renovation.

The design and display style of the stores is unique to each format, and applied to all stores of the format. The store layout is adapted to the physical space of the store, but the general idea of the outline is uniform between all stores of the format.

4.c METHODOLOGY

After an approach to the literary review and the choice of the variables to be object of study, a more detailed literary review on these was made. Afterwards, a batch of questions were put together in order to create a questionnaire to carry out in some stores customer's. The fact that the questionnaire had to be executed in super and hypermarkets was taken into consideration while the construction of the questions and the questionnaire.

Besides the questions regarding customer perception on atmosphere variables, we also included in the questionnaire two other sections of questions, one regarding demographical information of the customer and store preference and frequency of visit and another regarding information about the store at which the questionnaire was conducted.

Most of the questions regarding customer perception on atmosphere variables had a five point scale answer choice, where the customer had to choose only one.

After the questionnaire was finished, we carried out a small pre-test on some customers to see if all the questions were understood by the subjects and to test the efficiency and time required to execute the questionnaire.

This pre-test was conducted on 11 customers and allowed us to identify some questions that were a bit confusing and that needed revision. Also, since the questionnaire was too long and took too much time to execute, which we sensed that by the annoyance of some customers, we decided to cut some of the original questions. Besides these corrections, which were all made into the final version of the questionnaire, the rest of the questionnaire was found to be understood by the subjects and to suit its purpose.

The questionnaire was constructed in a form of a set of questions for each variable in study, in order to conduct the subject from the awareness of the variable to an evaluation of the level to which that specific variable contributes to his/hers well being and comfort in the shopping experience.

The questionnaire was conducted in the official language of the country were the study was made (Portugal), which is Portuguese. The original and a translated version in English are available in the appendix section.

As indicated previously, the questionnaire was executed in 5 supermarkets from the Modelo Bonjour banner and 2 hypermarket stores from the Continente banner. In order for us to have an equivalent sample of both store formats, we determined a sample size of about 150

questionnaires per format. This led us to 75 questionnaires per Continente store and 30 questionnaires per Modelo Bonjour store.

Also, since weekends are days of preference for shoppers, and at the end of month is when people have more available money to spend, these conditions were considered in programming the execution of the questionnaires. So, subjects were targeted between the late 25th (Friday, after working hours) and 27th of May (Sunday) of 2007. In one store (Continente Vasco da Gama), due to a non-appearance problem from one of the inquisitives, some of the questionnaires (12) were made on the 2nd of June of 2007.

In total, 302 questionnaires were made in the several stores, as follows:

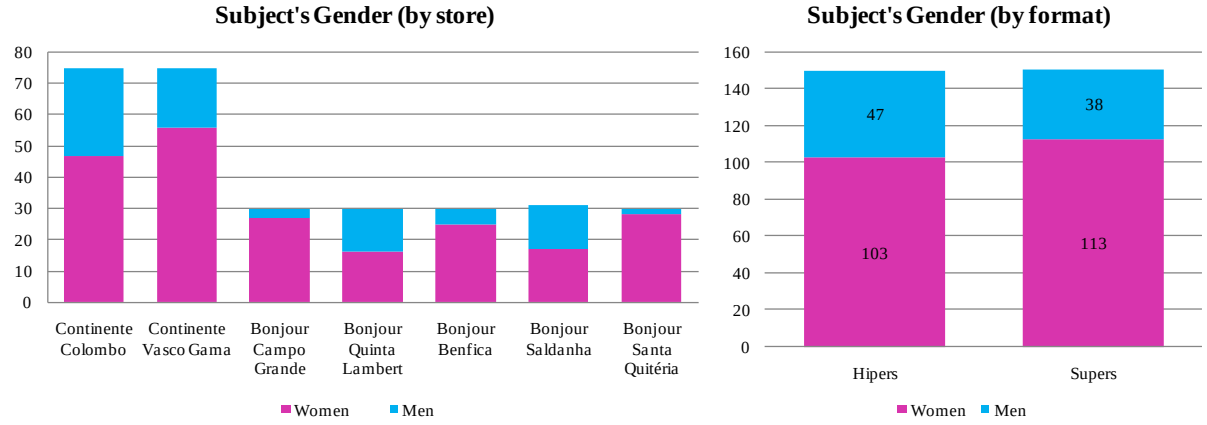
- Continente Colombo 75 questionnaires
- Continente Vasco da Gama 76 questionnaires
- Modelo Bonjour Campo Grande 30 questionnaires
- Modelo Bonjour Quinta Lambert 30 questionnaires
- Modelo Bonjour Benfica 30 questionnaires
- Modelo Bonjour Saldanha 31 questionnaires
- Modelo Bonjour Santa Quitéria 30 questionnaires

Of the 302 questionnaires, one questionnaire from Continente Vasco da Gama was considered not valid, since it was from a customer that only bought flowers every now and then at the store, and for not being a typical Modelo and Continente customer.

4c..i DEMOGRAPHICAL CHARACTERIZATION OF THE SAMPLE IN STUDY

This section aims to characterize demographically the sample in study, regarding the independent variables of Age and Gender.

Figure 5. Sample's Gender distribution by store and store format



Looking into the previous figure, we can see that most of the subjects are women (71,8%), especially in the supermarket format (74,8% against 68,7% in the hypermarket format). The store that shows a more balanced distribution is the supermarket Bonjour Quinta do Lambert, with 53% of female subjects, while the most unbalanced distribution occurs in the supermarket Bonjour Santa Quitéria, with 93% of female subjects. From these opposite examples, we can see that the most extreme distributions belong to supermarkets (previously mentioned; 54,8% of female subjects in Bonjour Saldanha; 83,3% in Bonjour Benfica; and 90% in Bonjour Campo Grande), while the hypermarkets have more similar distributions (62,7% for Continente Colombo and 74,7% for Continente Vasco da Gama).

Figure 6. Sample's Age distribution by Gender and store format

Subject's Age	Hypers			Supers			Total		
	Women	Men	Total	Women	Men	Total	Women	Men	Total
> 70 years old	8	2	10	6	2	8	14	4	18
66 to 70 years old	4	1	5	4	0	4	8	1	9
61 to 65 years old	3	3	6	6	0	6	9	3	12
56 to 60 years old	7	0	7	9	3	12	16	3	19
51 to 55 years old	10	0	10	9	1	10	19	1	20
46 to 50 years old	12	4	16	9	4	13	21	8	29
41 to 45 years old	10	6	16	8	3	11	18	9	27
36 to 40 years old	19	6	25	14	5	19	33	11	44
31 to 35 years old	19	6	25	9	4	13	28	10	38
26 to 30 years old	19	12	31	5	6	11	24	18	42
21 to 25 years old	12	12	24	12	3	15	24	15	39
< 20 years old	2	0	2	0	2	2	2	2	4
Total	**125**	**52**	**177**	**91**	**33**	**124**	**216**	**85**	**301**

Number of subjects

Figure 7. Sample's Age Group distribution by Gender and store format (in percentage)

Subject's Age	Hypers			Supers			Total		
	Women	Men	Total	Women	Men	Total	Women	Men	Total
Seniores (over 60 years old)	8,5%	3,4%	**11,9%**	12,9%	1,6%	**14,5%**	**10,3%**	**2,7%**	**13,0%**
Adults (31 to 60 years old)	43,5%	12,4%	**55,9%**	46,8%	16,1%	**62,9%**	**44,9%**	**14,0%**	**58,8%**
Young (less than 31 years old)	18,6%	13,6%	**32,2%**	13,7%	8,9%	**22,6%**	**16,6%**	**11,6%**	**28,2%**
Total	**70,6%**	**29,4%**	**100,0%**	**73,4%**	**26,6%**	**100,0%**	**71,8%**	**28,2%**	**100,0%**

Percentage of subjects

As we can see from the above figures, the hypermarket format has a younger customer than the supermarket format. This becomes more distinctive if we look into these differences by age group, where we can see that we have 32,2% of subjects with less than 31 years old in the hypermarkets, while this number is only 22,6% in the supermarkets. On the other hand, we found 14,5% of subjects over 60 years old in the supermarket format, while this number is only 11,9% in the hypermarkets. Thus, the supermarkets have a more elderly customer base. Looking into gender differences, we can see that male shoppers are younger than female shoppers, especially in the hypermarket format.

Figure 8. Sample's Age distribution by store and store format

Subject's Age	by Store							by Format	
	Continente Colombo	Continente Vasco Gama	Bonjour Campo Grande	Bonjour Quinta Lambert	Bonjour Benfica	Bonjour Saldanha	Bonjour Santa Quitéria	**Total Hypers**	**Total Supers**
> 70 years old	4	5	1	2	0	1	5	**9**	**9**
66 to 70 years old	1	1	0	0	0	1	6	**2**	**7**
61 to 65 years old	0	5	0	2	0	2	3	**5**	**7**
56 to 60 years old	1	5	0	3	2	5	3	**6**	**13**
51 to 55 years old	3	6	2	1	2	2	4	**9**	**11**
46 to 50 years old	5	4	4	5	4	6	1	**9**	**20**
41 to 45 years old	8	7	2	4	2	2	2	**15**	**12**
36 to 40 years old	9	12	3	3	8	6	3	**21**	**23**
31 to 35 years old	10	12	5	4	6	0	1	**22**	**16**
26 to 30 years old	20	9	4	3	3	3	0	**29**	**13**
21 to 25 years old	13	8	9	3	2	2	2	**21**	**18**
< 20 years old	1	1	0	0	1	1	0	**2**	**2**
Total	**75**	**75**	**30**	**30**	**30**	**31**	**30**	**150**	**151**

Number of subjects

Figure 9. Sample's Age Group distribution by store and store format (in percentage)

Subject's Age	by Store							by Format	
	Continente Colombo	Continente Vasco Gama	Bonjour Campo Grande	Bonjour Quinta Lambert	Bonjour Benfica	Bonjour Saldanha	Bonjour Santa Quitéria	**Total Hypers**	**Total Supers**
Seniores (over 60 years old)	6,7%	14,7%	3,3%	13,3%	0,0%	12,9%	46,7%	**10,7%**	**15,2%**
Adults (31 to 60 years old)	48,0%	61,3%	53,3%	66,7%	80,0%	67,7%	46,7%	**54,7%**	**62,9%**
Young (less than 31 years old)	45,3%	24,0%	43,3%	20,0%	20,0%	19,4%	6,7%	**34,7%**	**21,9%**
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**

Percentage of subjects

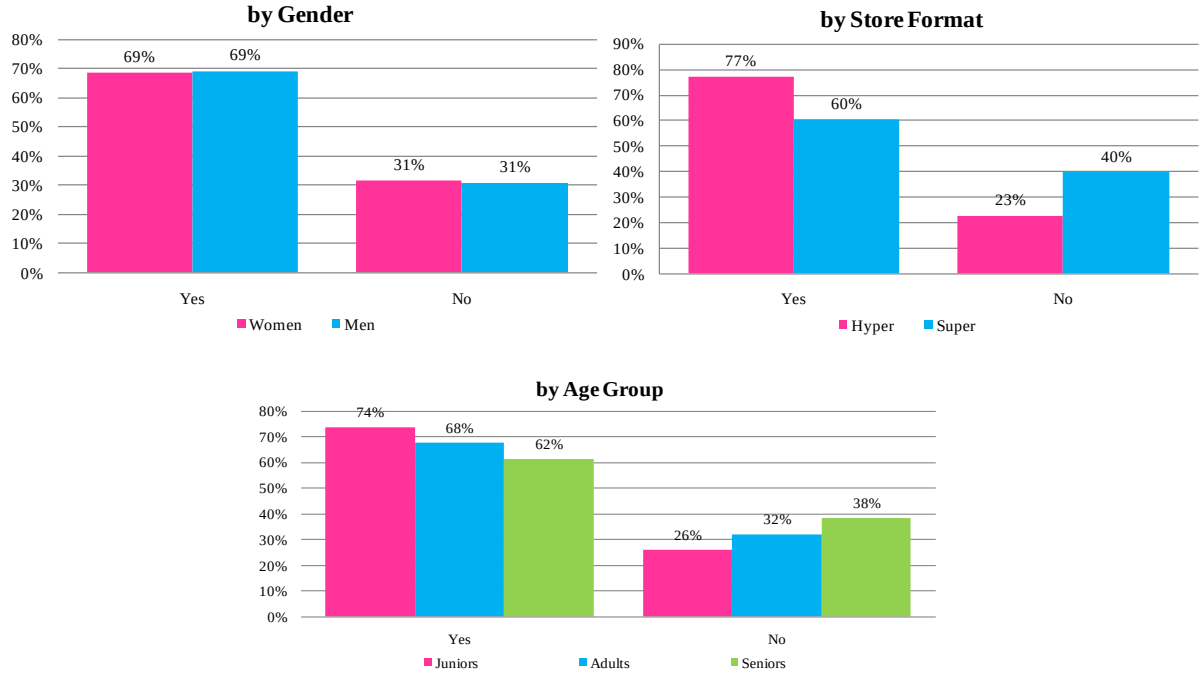
As shown in the previous figure, there are differences between the age group within the stores, and even within the same banner or format. Although the adult group is definitely the more significant in the Continente banner, this group is more salient in the Vasco da Gama store. This may be justified by the physical localization of each store, since the Colombo store is closer to the city centre, universities and schools.

On the other hand, within the Bonjour banner, we also have the adult age group as the more significant one, but there are some major differences between some stores. While in the Campo Grande store we have 43,3% of young customer, in the Santa Quitéria store this group only represents 6,7%. This last store is clearly the store with the eldest customers, which may be explained by the physical location of the store, since it's in one of the most ancient localizations of the city.

4c..ii CUSTOMER CHARACTERIZATION OF THE SAMPLE IN STUDY

In order to characterize the sample in terms of shopper profile, we put into the questionnaire a few questions about frequency of shopping, what kind of products were bought, how long had the subject been a customer of the store, if the subject makes the big household shopping in the store and what other stores does the subject visit. These questions allowed us to take the following conclusions about the customer profile of the subjects.

Figure 10. Subjects that make the big household shopping at the store (in percentage)

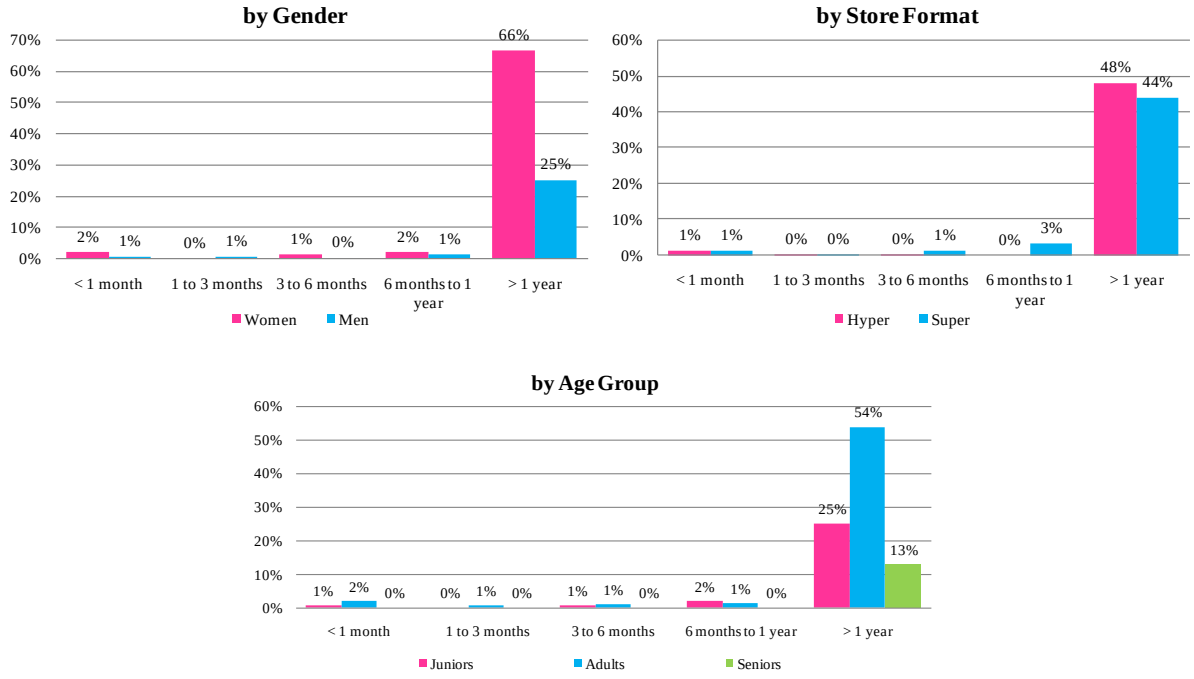


Although the subjects were mainly female (72%), it is interesting to notice that we have the same proportion of men and women that state that they make their big household shopping at the store where the questionnaire was conducted (69%).

When comparing customers between store formats, we can see that 77% of the hypermarket customers say that they make their big household shopping at the store where the questionnaire was conducted, while only 60% of the supermarket customers say the same.

As to age groups, the graph shows us interesting results. As the junior subjects tend to be the ones with a higher percentage of people who make their big household shopping at the store where the questionnaire was conducted (74%), the seniors are the age group where this indicator is lower (62%).

Figure 11. Distribution of the subjects longevity as customers of the stores

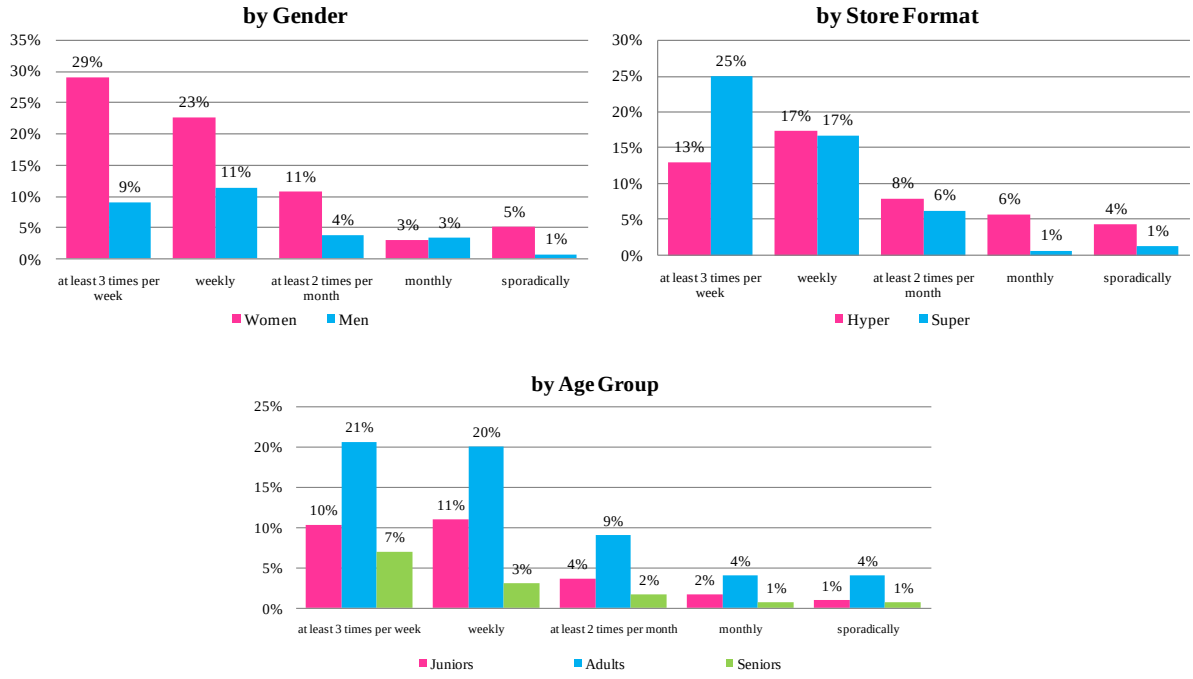


The previous figure clearly shows us that most of the customers that were inquired have been customers of that particular store for over a year (92%). Although very similar, this number is not the same within gender (93% of women and 89% of men).

When analysing these number according to format, 96% of the hypermarket subjects have been customers of the store for over a year, while in the supermarket subjects this number is slightly lower – 87%.

As to age groups, here we find that the 88% of the junior subjects have been customers of the store for over a year, while this number is 92% in the adult subjects and 100% in the senior subjects.

Figure 12. Distribution of the frequency of visit of the subjects to the stores



As we can see in the previous figure, 72% of the subjects visit the store at least once a week, while only 6% visit the store sporadically. This number is higher in the supermarket stores (83%) than in the hypermarket stores (61%), and within the junior and senior age groups (75% and 77% respectively) than in the adult age group (69%).

As we can see in figure 13 (see Annex 3), the products that are bought by men and women are slightly different. While women buy more animal products, frozen food, household and cleaning products, fruit and vegetables, fish and meat, newspapers, magazines and books, toys and sports products, shoes and clothes, home appliances and household utensils, men buy more beverages and delicatessen.

While customers of hypermarkets buy more animal products, frozen food, personal hygiene and household cleaning products, newspapers, magazines and books, toys and sports products, shoes and clothes, home appliances and household utensils, supermarket customers buy more bakery and pastry, fruit and vegetables and delicatessen. This is related to the range of products that are available in each format, since some of the product categories, such as clothes, shoes, home appliances and others are not available at supermarkets.

In what age groups are concerned, junior subjects buy more groceries, fruit and vegetables and toys and sports products, adults buy more beverages, frozen products and personal hygiene products, and seniors buy more eggs and dairy products, bakery and pastry, fish and meat and delicatessen.

4.d DATA ANALYSIS

4d..i METHODOLOGY USED

After creating the database with all the data gathered through the questionnaires, and after the descriptive analysis of the subjects was done, we pursued analysing the existing data, according to their nature in order to try to reduce information. With this in mind, a Principal Component Analysis was made to each of the groups of questions regarding each independent variable (music, scent, cleanliness, lighting, crowding, temperature, waiting cues, layout and display).

Using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (tests whether the partial correlations among variables are small; should be greater than 0.5 for a satisfactory factor analysis to proceed) on the group variables, we got the following results of the KMOs:

Variable	*KMO*	*Variable*	*KMO*
Music	0,806	Temperature	**0,390**
Scent	0,557	Layout	0,782
Cleanliness	0,702	Waiting cues	0,663
Lighting	0,674	Crowding	0,779

From all the indicators in the previous table, Temperature was the only variable were the KMO measure indicates that the factor analysis is not adequate. All the remaining variables information can be reduced through a factor analysis.

After identifying all the factors, we had to test if both of the parametrical tests presuppositions were being complied (normality and variance equality). If so, then we performed the parametrical test for means equality (t-student), and, if not, then we performed the non-parametrical test for means equality (Mann-Whitney).

However, according to the Law of Large Numbers (theorem in probability that describes the long-term stability of the mean of a random variable; given a random variable with a finite expected value, if its values are repeatedly sampled, as the number of these observations increases, the sample mean will tend to approach and stay close to the expected

value, i.e., the average for the population), the sample in question can also be tested using parametrical tests.

Nevertheless, and in order to strengthen the analysis, all parametrical tests results, which presuppositions were not complied, were confirmed with non-parametrical tests.

4d..ii TEST RESULTS

Music

H1 – the customer's perception of the existence of background music is the same, regardless of store format

The first question asked to the subjects, regarding music, was if they were aware of the existence of background music at the store. Only those who were aware of it would continue to answer to the rest of the music questions. Because of this elimination question, this particular question could not be considered in the factor analysis. Nevertheless, we pursued with the question if the awareness of music was the same in both formats.

Results show that more than half of the subjects (55%) were not aware of background music existence. Also, according to the results of the t-student tests, the awareness of the existence of background music does not vary according to store format, gender or age group of the customer.

Regarding the remaining questions of the music variable, according to the principal component analysis, this variable can be split into two main components (m1 and m2): the first one (m1) includes rhythm, volume and pleasantness of the background music and the second one (m2) includes the influence of the background music existence in the comfort and well being as well as "the type of music playing is the kind of music I normally listen to".

When testing the two components with the t-student test for equality of means in both samples (hyper and super formats), we can conclude that the m1 does not have the same mean in both formats. Thus, we can state that the hypermarket customers have a higher agreement level than the supermarket customers when asked if the rhythm and volume of the background music is adequate and that background music is pleasant.

The other component, m2, did not show any variation of means between the two formats, neither both components when comparing age groups or gender of the subjects.

Scent and Cleanliness

H2 – the customer's perception of the existence of a pleasant/fresh scent at the store is the same, regardless of the store format

As in music, the first question was an eliminatory question that asked subjects if they were aware of any scent at the store. Only those who responded positively continued to answer the rest of the scent variable questions.

According to the results, only 18% of the respondents were aware of a scent at the store. Of these, 92.5% could identify the origin of the scent or scents. Most people (80%) identified fish (39%), fresh bread (29%) or roasted chicken (16%).

According to the results of the t-student tests, the awareness of the existence of a scent at the store does not vary according to store format, gender or age group of the customer. Thus, the ability of the identification of the origin of the scent was also proved to not vary according to either age group, gender of the subject or store format.

According to the principal component analysis, this variable can be split into two main components (s1 and s2). While the first component, s1, includes the influence of the pleasant and fresh scent existence in the comfort and well being and the pleasantness of the scent, the second component is the homogeneity of the scent in the store.

When testing both components with the t-student test for equality of means in both formats, we can conclude that the neither components have the same mean in both formats. Hence, we can state that the hypermarket customers have a higher agreement level than the supermarket customers when asked if the presence of a pleasant/fresh aroma increases my well being and comfort and if they feel a pleasant and fresh aroma inside the store. Contrarily, regarding s2, the supermarket customers have a higher agreement level than the hypermarket customers when asked if the aroma or odour is present all over the store.

The s2 component showed a variation of means between the junior age group and the other age groups. In this case, the junior subjects had a lower agreement level than the other subjects when asked if the aroma or odour is present all over the store.

Neither component showed a variation of means when compared by gender, nor when comparing adults or senior with the other age groups.

H3 – the customer's perception of the cleanliness and tidiness of the store is the same, regardless of the store format

According to the principal component analysis, this variable can be split into two components (c1 and c2). While the first one is related with the compliance of the basic cleanliness expectations (no garbage and clean floor, clean shelves and fridges and clean and tidy store, with no damaged packages), the second component is the perceived influence of a clean and tidy store on the customers well being and comfort.

As tested and proved according to them, neither component has mean varies when compared with age group and gender of the subjects or with store format.

H4 – H2 has a positive correlation with H3

Using Pierson's correlation test, we conclude that there is a positive correlation between s1 and c1 and c2. This means that the influence of the pleasant and fresh scent existence in the comfort and well being and the pleasantness of the scent is positively correlated with the basic cleanliness expectations of the subjects and with the perceived influence of a clean and tidy store on the customers well being and comfort.

The other scent component, s2, does not have any statistically significant correlation with either cleanliness component.

Lighting

H5 – the customer's perception of the existence of adequate lighting at the store is the same, regardless of the store format

This variable can also be divided into two components, l1 and l2. While l1 is composed by the general lighting of the store (in the corners, in the fresh products area, in the store overall areas), l2 is composed by the influence of the lighting in the comfort and well being of the customer.

Using t-student tests, l1 has a variation of means when comparing gender of the subjects and store format. According to results, the women have a higher agreement level than the men when asked if the general lighting of the store was adequate, while the hypermarket customers also have a higher agreement level than the supermarket customers when asked if the general lighting of the store was adequate. This component does not show any means variation when compared between age groups.

The other component, l2, did not show any means variation between any of the age groups or gender of the subjects, or between store format customers.

Temperature

H6 – the customer's perception of the existence of adequate temperature inside the store is the same, regardless of the store format

With a KMO measure of 0.390, this variable cannot be reduced into components. Therefore, an analysis has to be done to each one of the questionnaire questions regarding this variable. Consequently, we have the following temperature split variables:

- t1: adequacy of the temperature near the fridge areas
- t2: adequacy of the temperature near the surroundings areas (non fridge)
- t3: influence of the temperature level in the corridors being uniform (even at the fridge areas) is important for the comfort of the purchase
- t4: the fact that the temperature inside the store is adequate to the exterior temperature (climate), increases the well being and comfort of the customer

Using t-student tests, we conclude that, t1, t2 and t4 have significant means difference when compared between store format. While in t1 the supermarket customers have a higher agreement level than the hypermarket customers (when asked if the temperature near the fridge areas is adequate), the opposite is registered in t2 and t4, where the hypermarket customers have a higher agreement level than the supermarket customers (when asked if the temperature near the surroundings areas is adequate and if the fact that the temperature inside the store is adequate to the exterior temperature, increases their well being and comfort).

Only t1 showed to have means differences within gender comparison. Here, women show a higher agreement level than men when asked if the temperature near the fridge areas is adequate. Age wise, only t3 showed differences between the senior and other subjects; the elders proved to have a higher agreement level than the others when asked if the temperature levels in the corridors being uniform (even at the fridge areas) is important for the comfort of the purchase.

Layout and Displays

H7 – the customer's perception of the clear identification of product categories and information in the shelves is the same, regardless of the store format

This variable is breakable into three components: La1 – Organization and circulation in the store, La2 – influence of layout and displays in comfort and well being of the customer and La3 – product price identification.

Although every component registers some difference of means, only one registers it in the formats – La2. Here, results proved that the hypermarket customers have a higher agreement level than the supermarket customers when asked if the clear identification of the product categories and the shelves information increases their well being and comfort. However, this result was only proved by one of the performed tests: parametrical test t-student. The non-parametrical test Mann-Whitney did not show this result, so we suggest that this particular situation should be studied more thoroughly in future research.

Regarding gender, none of the components seems to be sensitive to this variable, while all the components proved to be sensitive to the age groups variables. While La3 proved that Junior subjects have a higher agreement level than the other subjects when asked if they can easily identify the prices of the products, La2 proved that seniors have a lower agreement level that the juniors and adults when asked if the clear identification of the product categories and the shelves information increases my well being and comfort.

Also, La3 seems to be slightly sensitive to another age group – adults. However, this is shown only by one of the performed tests: non-parametrical test Mann-Whitney, where we can see that adults have a lower agreement level than other subjects when asked if they can easily identify the prices of the products. Since the parametrical test t-student did not show this result, we suggest that this situation should be more thoroughly studied in future research.

Contrarily, La1 proved that seniors have a higher agreement level that the juniors and adults when asked if the corridors in the store are spacious and allow a good circulation, the product organization allows an easy location of what they are looking for, they can easily identify the items that are in promotion in the store and if the quantity of promotional / informative posters inside the store is adequate.

Waiting cues

H8 – the customer's perception of waiting time in the store is the same, regardless of the store format

According to the principal component analysis, this variable can be split into three main components: w1 – service counter waiting time, w2 – cashier waiting time and prompt

response from the store staff when needed and w3 – influence of waiting time on customers well being and comfort.

While w3 did not prove to have significant difference in means when compared between subject gender and age or even between store format customers, both w1 and w2 proved to be sensitive to age groups and store format customers.

Both w1 and w2 proved that supermarket customers have a higher agreement level than hypermarket customers when asked if the waiting time to be attended at the service counter is reasonable (delicatessen, butchers, fish, baker, etc), if the waiting time at the cashiers is reasonable, if when help is needed, they can easily find an employee shop assistant and if there is a prompt response from the store (for example, by opening more cashiers) at the moments of more customer flow.

Regarding the age groups, the tests proved that junior subjects have a lower agreement level than adults and seniors when asked if the waiting time at the cashiers is reasonable, if when help is needed, they can easily find an employee shop assistant and if there is a prompt response from the store (for example, by opening more cashiers) at the moments of more customer flow (w2). However, this result was only proved by one of the performed tests: parametrical test t-student. A similar situation happens in w1, where results show that junior customers have a higher agreement level than adult or senior customers when asked if the waiting time to be attended at the service counter is reasonable (delicatessen, butchers, fish, baker, etc). Yet, this result was only proved by one of the performed tests: non-parametrical test Mann-Whitney. Hence, we suggest that these particular situations should be studied more thoroughly in future research.

Crowding

H9 – the customer's perception of number of customers at the store is the same, regardless of the store format

Results showed that we can divide this variable into two main components: Cr1 – number of clients at the store and Cr2 – influence of the number of clients at the store on customers well being and comfort.

Both components (Cr1 and Cr2) were proved to be sensitive to store format. In both situation, results prove that hypermarket customers have a higher crowding perception level than supermarket customers when asked about the number of clients at the store waiting at the service counters, cashiers and surrounding areas of the store at the moments of higher flow

(except in special occasions such as Christmas) and if the fact of having a reasonable number of customers in the store increases their well being and comfort. However, this result for Cr2 was only proved by one of the performed tests: parametrical test t-student. The non-parametrical test Mann-Whitney did not show this result, so we suggest that this particular situation should be studied more thoroughly in future research.

Regarding the gender variable, only Cr1 showed to be sensitive. Here, results show that men have a higher crowding perception level than women when asked about the number of clients at the store waiting at the service counters, cashiers and surrounding areas of the store at the moments of higher flow (except in special occasions such as Christmas). But, again, this result for Cr2 was only proved by the parametrical t-test, so we suggest that this particular situation should be studied more thoroughly in future research.

Regarding the age group variable, results proved that juniors have a higher crowding perception level than adults and seniors customers when asked about the number of clients at the store waiting at the service counters, cashiers and surrounding areas of the store at the moments of higher flow (except in special occasions such as Christmas), while senior customers have a lower crowding perception level than junior and adult customers when asked the same.

General Evaluation

H10 – the customer's perception on the global store environment is the same, regardless of the store format

Since this variable was transformed into just one question in the questionnaire, no factor analysis was necessary.

The test results proved that this variable is sensitive to store format, where hypermarket customers have a higher agreement level than supermarket customers when asked if in global, the store environment/ atmosphere looks pleasant.

This variable did not show to be sensitive to gender, but regarding age group, adult customers have a lower agreement level than junior and senior customers when asked if in global, the store environment/ atmosphere looks pleasant. Still, this result was only proved by the t- test, so we suggest that this situation should be studied more thoroughly in future research.

Other hypotheses

Next, we will present the results for the hypothesis that we presented based on other authors papers:

Ha – The volume at which the background music is played has a positive correlation with the pleasantness perception of the music

This hypothesis is accepted, with a positive correlation of 0,687.

Hb – The awareness of the existence of music has a positive correlation with the intention of the customer to return to the store

This hypothesis is partially accepted, since the results of the tests point us to a slight negative correlation of -0,117. This issue should be analysed further in detail in future research.

Hc - The awareness of the existence of music has a positive correlation with the overall perception of the store environment

This hypothesis is rejected according to test results.

Hd – the pleasantness perception of the music that is played in the store has a positive correlation with the intention of the customer to return to the store

He – the pleasantness perception of the music that is played in the store has a positive correlation with the level of intension to recommend the store to family and friend

Both of these hypotheses are rejected according to test results.

Hf1 – the pleasantness perception of the music that is played in the store has a positive correlation with the level of agreement that the waiting time to be attended at the service counter in the store is reasonable

Hf2 – the pleasantness perception of the music that is played in the store has a positive correlation with the level of agreement that the waiting time to be attended at the checkouts of the store is reasonable

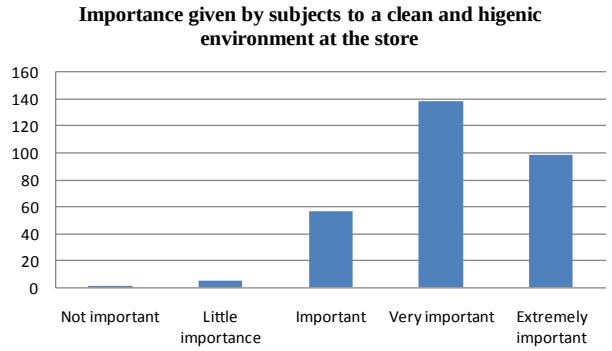
Both of these hypotheses are rejected according to test results.

Hg1 – The volume at which the background music is played has a positive correlation with the level of agreement that the waiting time to be attended at the service counter in the store is reasonable.

Hg2 – The volume at which the background music is played has a positive correlation with the level of agreement that the waiting time to be attended at the checkouts of the store is reasonable

Test results show that these hypotheses are rejected. Nevertheless, results show us that Hg1 has a slight negative correlation (-0,138), so we suggest that this issue should be pursued through future research.

Hh – there is a high or very high degree of importance attributed by the customer to a pleasant clean and hygienic environment



This hypothesis was tested with simple descriptive analysis of the data gathered from the questionnaire. Here, we can see that 79% of the subjects consider a clean and hygienic environment at the store very or extremely important. Therefore, this hypothesis is accepted.

Hi1 – the level of agreement that the store's lighting in the fresh good areas allows the customer to evaluate the quality of the products has a positive correlation with the intention of the customer to return to the store.

Hi2 – the level of agreement that the store's light at the stores corners is sufficient has a positive correlation with the intention of the customer to return to the store.

Hi3 – the level of agreement that the store's general lighting is sufficient has a positive correlation with the intention of the customer to return to the store.

In overall, test results show that these hypotheses should be rejected. Nevertheless, Hi1 and Hi2 register very low results that could indicate that we should accept the hypothesis (0,066 and 0,079). We suggest that this matter be pursued in detail in future research.

Hj1 – the level of agreement that the store's lighting in the fresh good areas allows the customer to evaluate the quality of the products has a positive correlation with the overall perception of the store environment.

Hj2 – the level of agreement that the store's light at the stores corners is sufficient has a positive correlation with the overall perception of the store environment.

Hj3 – the level of agreement that the store's general lighting is sufficient has a positive correlation with the overall perception of the store environment.

Test results show us that these three hypotheses should be accepted, although with caution, since the results point us to slightly positive correlations (0,152 for Hj1, 0,161 for Hj2 and 0,156 for Hj3). Further research is needed to confirm and strengthen these conclusions.

HK – the level of agreement that the store corridors are spacious and allow a good circulation has a positive correlation with the level of agreement that the number of customers at the store on moments of higher customer flow is reasonable

This hypothesis is rejected by test results.

Hl1 – the level of agreement that the waiting time to be attended at the service counter in the store is reasonable has a positive correlation with the level of agreement that the customer can find a store employee when help is needed.

Hl2 – the level of agreement that the waiting time to be attended at the checkout is reasonable has a positive correlation with the level of agreement that the customer can find a store employee when help is needed.

Hl3 – the level of agreement that the waiting time to be attended at the service counter in the store is reasonable has a positive correlation with the level of agreement that the number of customers at the store on moments of higher customer flow is reasonable.

Hl4 – the level of agreement that the waiting time to be attended at the checkout is reasonable has a positive correlation with the level of agreement that the number of customers at the store on moments of higher customer flow is reasonable.

Correlation test results show us different conclusions for each one of these hypotheses. While the first one (Hl1) has a very slight positive correlation (0,080), which we would suggest to be pursued through future research, the second one (Hl2) has a strong positive correlation (0,553), thus, we accept the hypothesis.

As for Hl3 and Hl4, both of these hypotheses show that they should be partially accepted. Hl3 test results show that there is a negative correlation (-0,431), while Hl4 test results show us a slight negative correlation (-0,133).

Hm1 – the level of agreement that the waiting time to be attended at the service counter in the store is reasonable has a positive correlation with the intention of the customer to return to the store

Hm2 – the level of agreement that the waiting time to be attended at the checkout is reasonable has a positive correlation with the intention of the customer to return to the store

Test results show us that while we should accept Hm1, since it has a slight positive correlation (0,118), Hm2 should be partially accepted, since results show us that there is a slight negative correlation (-0,111). These results seem contradictory, so we suggest that this matter should be thoroughly analysed through future research.

Hn1 – the level of agreement that the waiting time to be attended at the service counter in the store is reasonable has a positive correlation with the level of intension to recommend the store to family and friends

Hn2 – the level of agreement that the waiting time to be attended at the checkout is reasonable has a positive correlation with the level of intension to recommend the store to family and friends

Correlation test results show us that both of these hypotheses should be accepted with caution, since they have slightly positive results (0,081 for Hn1 and 0,138 for Hn2). This subject should be pursued in future research.

Ho1 – the level of agreement that the customer can find a store employee when help is needed has a positive correlation with the intention of the customer to return to the store

Ho2 – the level of agreement that the customer can find a store employee when help is needed has a positive correlation with the overall perception of the store environment

While test results show us that Ho1 has a very slight negative correlation (-0,077), which points us to the need of further research, Ho2 shows us that we should accept the hypotheses, since it has a positive correlation of 0,215.

Hp1 – the level of agreement that the number of customers at the store on moments of higher customer flow is reasonable has a negative correlation with the intention of the customer to return to the store

Hp2 – the level of agreement that the number of customers at the store on moments of higher customer flow is reasonable has a negative correlation with the level of intension to recommend the store to family and friends

Hp3 – the level of agreement that the number of customers at the store on moments of higher customer flow is reasonable has a negative correlation with the overall perception of the store environment

Correlation test results for these hypotheses point us to the need of future research, since the results are fragile and contradictory, similar to what we found in Hn hypotheses. While Hp1 is rejected, Hp2 results show us that we should accept it, and Hp3 results show an extremely slight positive correlation (0,059). Thus, these findings support the need for the crowding and patronage intention need to be further studied and researched.

4.e CONCLUSIONS OF THE FILED STUDY

According to the present study, all of the dependent variables in analysis are sensitive to store format but one – cleanliness. The hypermarket customers have a higher level of agreement than the supermarket customers when asked if:

- the rhythm and volume of the background music is adequate and that background music is pleasant;
- the presence of a pleasant/fresh aroma increases my well being and comfort and if they feel a pleasant and fresh aroma inside the store;
- the general lighting of the store was adequate;
- the temperature near the surroundings areas is adequate and the fact that the temperature inside the store is adequate to the exterior temperature, increases their well being and comfort;
- the clear identification of the product categories and the shelves information increases their well being and comfort;
- the number of clients at the store waiting at the service counters, cashiers and surrounding areas of the store at the moments of higher flow (except in special occasions such as Christmas) is excessive;

- the fact of having a reasonable number of customers in the store increases their well being and comfort;
- in global, the store environment/ atmosphere looks pleasant.

On the other hand, the supermarket customers have a higher level of agreement than the hypermarket customers when asked if:

- the aroma or odour is present all over the store;
- the temperature near the fridge areas is adequate;
- the waiting time to be attended at the service counter is reasonable; the waiting time at the cashiers is reasonable; when help is needed, they can easily find an employee shop assistant and if there is a prompt response from the store (for example, by opening more cashiers) at the moments of more customer flow.

Even though the age group and gender were not the focus point of our study, since the database provided the information for these test to be performed, we could conclude that women have a higher level of agreement than men when asked if the general lighting of the store was adequate and the temperature near the fridge areas is adequate, while men have a higher level of agreement than women when asked if the number of clients at the store waiting at the service counters, cashiers and surrounding areas of the store at the moments of higher flow (except in special occasions such as Christmas) is excessive.

Regarding the age groups variable, we could conclude that the younger subjects have a higher level of agreement than adults and seniors when asked if they can easily identify the prices of the products; the waiting time to be attended at the service counter is reasonable and if the number of clients at the store waiting at the service counters, cashiers and surrounding areas of the store at the moments of higher flow (except in special occasions such as Christmas) is excessive. On the other hand, the junior age group had a lower agreement level than adults and seniors when asked if the waiting time at the cashiers is reasonable; when help is needed, they can easily find an employee shop assistant; there is a prompt response from the store (for example, by opening more cashiers) at the moments of more customer flow and if the aroma or odour is present all over the store.

In contrast, adult subjects have a lower agreement level than junior and senior subjects when asked if they can easily identify the prices of the products and if, in global, the store environment/ atmosphere looks pleasant. As to the senior subjects, these have a higher agreement level than junior and adult subjects when asked if the temperature levels in the corridors being uniform (even at the fridge areas) is important for the comfort of the purchase

and if the corridors in the store are spacious and allow a good circulation, the product organization allows an easy location of what they are looking for, they can easily identify the items that are in promotion at the store and if the quantity of promotional / informative posters inside the store is adequate. On the other hand, seniors have a lower agreement level than junior and adult subjects when asked if the clear identification of the product categories and the shelves information increases my well being and comfort and if the number of clients at the store waiting at the service counters, cashiers and surrounding areas of the store at the moments of higher flow (except in special occasions such as Christmas) is excessive.

5. CONCLUSION

Throughout the literary review that was made for this study, several limitations and gaps were found, as we previously mentioned. This study has taken some steps into uncharted territory, such as conducting the same survey in different store formats, in a European country, in actual customers. This allowed us to pursue some of the other authors limitations and to take some steps into deeper their findings and to identify future needs for research.

Also, this study aimed to analyse several variables of the store atmosphere, unlike most of the other author studies, where most of them focused on only one variable. This allowed us to conduct an overall perception survey on the global store environment in a real scenario.

The surveys were conducted in the leader store chain of the country where the study took place (Portugal), in both super and hypermarkets, as to opposite to some of the older studies that took place in a specific department store (such as a winery or a restaurant). Also, we covered some of the less studied variables in the past research, such as temperature and cleanliness.

Although some of our findings are clear indicators of the need for future research, this study by itself is innovative by directly comparing survey results between store formats. Based on the present study findings, we established the need to explore in the future, throughout research and specific studies for the following subjects.

Customer age and gender influence on store atmospheric perception, especially regarding layout and waiting cues / time areas. The present study allowed us to test some variables, but since this study and questionnaire were designed to test store format on store atmospheric perception, some of the performed tests gave us insufficient or slightly statistical information that need to be backed up with further tests and analysis.

The store atmospheric variable that seems to have the higher need for further investigation is crowding, since it appears to be sensitive to age, gender and store format. The present study was able to reach some conclusions regarding this subject, but doubts remain regarding some of the results that were obtained, since some of the findings have little statistical significance, as the influence of gender in crowding perception.

Also, the present study as well as some of the authors reviewed in it, points to contradictory results between the correlation of crowding perception and intention of recommendation of the store. This clearly indicates the need of further research, which may

allow us to better understand which are the most important waiting cues that might influence a positive or negative recommendation of the customer to his friends or family.

In addition, the intention of returning to the store should also be subject of analysis, especially when compared with music and lighting perception. Although we tried to pursue some of the other authors' suggestions of research, results failed to give us concrete statistical information. Similarly, the correlation between waiting cues / time and music and crowding also needs to be pursued in the future, since the present study results leaves us some statistical uncertainties.

Another correlation that needs further analysis is between lighting perception and overall pleasantness of the store atmospherics. To boot, the correlation between service counter waiting times and prompt response from the store staff needs to be further studied.

All of the above suggestions for future research have a great importance to management personnel, since if might indicate them to key points where they should focus their attention in order to improve overall perception of customer service level and therefore, to customer satisfaction and patronage.

Study Limitations

Like any other study, ours is not an exception, since it also has some limitations. As we previously explained, some of the stores that were used in this study were not the ideal ones. Within the Continente banner, the size of the stores was not identical. Although both hypermarkets, Colombo's is a huge store, while Vasco da Gama's is a regular size hypermarket.

Another limitation that we found was the age of our subjects, since it was clearly different from one particular store to the other ones. One of the supermarkets that was surveyed had an extremely older customer age average than the other.

Also, this study was conducted in a big urban area, the capital of the country. In order to have general and global results, these studies should be made in both cities and rural environments, and in cities with different customer profiles.

Last but not the least; while Continente is the leading banner of hypermarkets in Portugal, Modelo Bonjour is not the leading banner of supermarkets. Sonae has the clear lead of hypermarkets in the country, but the supermarket leader is another company.

These limitations should be taken in consideration for future research.

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Modelo website, www.modelo.pt

7. ANNEXES

7.a ANNEX 1 – QUESTIONNAIRE

Questionnaire number:

Good morning/ afternoon,

We are making a questionnaire on the impact of the store atmosphere at the moment of purchase, for a research study for an university (ISCTE). Would it be possible for you to spare 5 minutes of your time? Thank you very much

1 Characterization of the Questionnaire

1.1 Is it at this store that you make the big shopping for the house, that is, the shopping were you spend more money, such as detergents, dry grocery and so on? Yes (1) ☐ No (2) ☐

	- 1 month (1)	from 1 to 3 months(2)	from 3 to 6 months (3)	from 6 months to 1 year (4)	+ 1 year (5)
1.2 For how long have you been visiting this store (or been customer of this store?)	☐	☐	☐	☐	☐

1.3 What kind of shopping to you make in this store (indicate all that are valid)

a) Groceries	☐	i) Fruit & Vegetables	☐
b) Animals Products	☐	j) Meat & Fish	☐
c) Drinks	☐	k) Delicatessen	☐
d) Milk, Yogurts (Dairy products) and Eggs	☐	l) Newspaper, Magazines and Books	☐
e) Frozen food	☐	m) Toys and Sport Ware	☐
f) Personal Hygiene Products	☐	n) Clothing and Footwear	☐
g) Detergents and house cleaning Products	☐	o) Electrical Appliances and Home Utensils	☐
h) Bakery and pastry	☐	p) Others	☐

	At least three times a week (1)	Weekly (2)	At least twice per month (3)	Monthly (4)	Sporadically (5)
1.4 Since the beginning of this year, what's the frequency you visit this store?	☐	☐	☐	☐	☐
1.5 Apart from this store, which others do you visit, and with what frequency (this year)?					
a) Continente	☐	☐	☐	☐	☐
b) Modelo Hiper	☐	☐	☐	☐	☐
c) Modelo Bonjour	☐	☐	☐	☐	☐
d) Carrefour	☐	☐	☐	☐	☐
e) Feira Nova	☐	☐	☐	☐	☐
f) Pingo Doce	☐	☐	☐	☐	☐
g) Jumbo	☐	☐	☐	☐	☐
h) Lidl	☐	☐	☐	☐	☐
i) Plus	☐	☐	☐	☐	☐
j) Mini Preço / Dia	☐	☐	☐	☐	☐
k) Intermarché	☐	☐	☐	☐	☐
l) Super Sol	☐	☐	☐	☐	☐
m) El Corte Inglês	☐	☐	☐	☐	☐
n) Others Which ones? _____	☐	☐	☐	☐	☐

2 Music

	Yes (1)	No (2)	
2.1 Were you aware of the existence of background music at the store?	☐	☐	If not, go to the next set of questions (group 3)

	Totally disagree (1)	Do not agree (2)	Do not agree nor disagree (3)	Agree (4)	Totally agree (5)
Which is your of agreement level regarding the following statements?					
2.2 The rhythm of the background music is adequate	☐	☐	☐	☐	☐
2.3 The volume at which the music is playing is adequate	☐	☐	☐	☐	☐
2.4 The type of music which is played at the store is the kind of music that I usually listen to	☐	☐	☐	☐	☐
2.5 The background music is pleasant	☐	☐	☐	☐	☐
2.6 The existence of background music increases my well being and comfort	☐	☐	☐	☐	☐

3 Odour / Fragrance

	Yes (1)	No (2)	
3.1 Were you aware of the existence of any odour or aroma in the store?	☐	☐	If not, go to the next set of questions (group 4)
3.2 Can you identify the origin of that odour or aroma? If so, which is it? _____	☐	☐	

	Totally disagree (1)	Do not agree (2)	Do not agree nor disagree (3)	Agree (4)	Totally agree (5)
Which is your of agreement level regarding the following statements?					
3.3 The aroma or odour is present all over the store	☐	☐	☐	☐	☐
3.4 You fell a pleasant and fresh aroma inside the store	☐	☐	☐	☐	☐
3.5 The presence of a pleasant/fresh aroma increases my well being and comfort	☐	☐	☐	☐	☐

4 Cleaning

	Totally disagree (1)	Do not agree (2)	Do not agree nor disagree (3)	Agree (4)	Totally agree (5)
Which is your of agreement level regarding the following statements?					
4.1 The store's floor has no garbage and it is clean	☐	☐	☐	☐	☐
4.2 The shelves and fridges are clean	☐	☐	☐	☐	☐
4.3 The store is clean, the products are tidy and not damaged	☐	☐	☐	☐	☐
4.4 The fact that the store is clean and tidy increases my well being and comfort	☐	☐	☐	☐	☐

5 Luminosity

	Totally disagree (1)	Do not agree (2)	Do not agree nor disagree (3)	Agree (4)	Totally agree (5)
Which is your of agreement level regarding the following statements?					
5.1 The light in the areas of fresh goods allows me to evaluate the quality of the products (meat, fish, legumes and fruits)	☐	☐	☐	☐	☐
5.2 The light at the corners of the store (more hidden areas) is sufficient	☐	☐	☐	☐	☐
5.3 The general light in the store is sufficient	☐	☐	☐	☐	☐
5.4 The fact that lighting is adequate and different in each area inside the store is important for the beauty and comfort of the purchase act	☐	☐	☐	☐	☐
5.5 The bigger the clarity / luminosity increases my well being and comfort	☐	☐	☐	☐	☐

6 Temperature

	Which is your of agreement level regarding the following statements?	Totally disagree (1)	Do not agree (2)	Do not agree nor disagree (3)	Agree (4)	Totally agree (5)
6.1	The temperature near the fridge areas (yogurts, frozen food, fish) is adequate	☐	☐	☐	☐	☐
6.2	The temperature near the surroundings areas (non fridge) is adequate	☐	☐	☐	☐	☐
6.3	The temperature levels in the corridors being uniform (even at the fridge areas) is important for the comfort of the purchase	☐	☐	☐	☐	☐
6.4	The fact that the temperature inside the store is adequate to the exterior temperature (climate), increases my well being and comfort	☐	☐	☐	☐	☐

7 Layout and store Displays

	Which is your of agreement level regarding the following statements?	Totally disagree (1)	Do not agree (2)	Do not agree nor disagree (3)	Agree (4)	Totally agree (5)
7.1	The corridors in the store are spacious and allow a good circulation	☐	☐	☐	☐	☐
7.2	The product organization allows an easy location of what I am looking for	☐	☐	☐	☐	☐
7.3	I can easily identify the items that are in promotion in the store	☐	☐	☐	☐	☐
7.4	The quantity of promotional / informative posters inside the store is adequate	☐	☐	☐	☐	☐
7.5	I can easily identify the price of the products	☐	☐	☐	☐	☐
7.6	The clear identification of the product categories and the shelves information increases my well being and comfort	☐	☐	☐	☐	☐

8 Waiting Time

	Which is your of agreement level regarding the following statements?	Totally disagree (1)	Do not agree (2)	Do not agree nor disagree (3)	Agree (4)	Totally agree (5)
8.1	The waiting time to be attended at the service counter is reasonable (delicatessen, butcher's, fish, baker, and so on)	☐	☐	☐	☐	☐
8.2	The waiting time at the cashiers is reasonable	☐	☐	☐	☐	☐
8.3	When I need help, I can easily find an employee shop assistant	☐	☐	☐	☐	☐
8.4	There is a prompt response from the store (for example, by opening more cashiers) at the moments of more customer flow	☐	☐	☐	☐	☐
8.5	The fact of the waiting times in the store are reasonable increases my well being and comfort	☐	☐	☐	☐	☐

9 Crowding Effect

		Small or non (1)	Some (2)	Reasonable (3)	A lot (4)	Excessive (5)
9.1	The number of customers waiting at the service counters in the moment of higher flow (except in special occasions such as Christmas) is....	☐	☐	☐	☐	☐
9.2	The number of customers waiting at the cashiers at the moments of higher flow (except in special occasions such as Christmas) is ...	☐	☐	☐	☐	☐
9.3	The number of customers at the store at the moments of higher flow (except in special occasions such as Christmas) is...	☐	☐	☐	☐	☐

	Which is your of agreement level regarding the following statements?	Totally disagree (1)	Do not agree (2)	Do not agree nor disagree (3)	Agree (4)	Totally agree (5)
9.4	The fact of having a reasonable number of customers in the store increases my well being and comfort	☐	☐	☐	☐	☐

10 Reasons and motivation for going to the store

10.1 From the following factors, which are the ones that bring you to the store and what is the importance level that you would give them	No importance (1)	Less important (2)	Important (3)	Quite important (4)	Very important (5)
a) Pleasant environment	☐	☐	☐	☐	☐
b) Pleasant music	☐	☐	☐	☐	☐
c) Pleasant luminosity	☐	☐	☐	☐	☐
d) Pleasant temperature	☐	☐	☐	☐	☐
e) Pleasant cleanliness and hygiene	☐	☐	☐	☐	☐
f) Layout and displays easy to read	☐	☐	☐	☐	☐
g) Design/beauty of the store (decoration and colours)	☐	☐	☐	☐	☐
h) Easiness on finding the products	☐	☐	☐	☐	☐
i) Employees friendliness	☐	☐	☐	☐	☐
j) Good location of the store (proximity)	☐	☐	☐	☐	☐
k) Easiness of parking	☐	☐	☐	☐	☐
l) Adequate waiting times	☐	☐	☐	☐	☐
m) Competitive prices of products in general	☐	☐	☐	☐	☐
n) Good price/quality relation in products of store brand (i.e. Continente and É)	☐	☐	☐	☐	☐
o) Variety of products that I can find in the store	☐	☐	☐	☐	☐
p) Quality of fresh products	☐	☐	☐	☐	☐

11 Recommendation

	Certainly not (1)	No (2)	Maybe (3)	Yes (4)	Certainly yes (5)
11.1 Do you intend to return to this store?	☐	☐	☐	☐	☐
11.2 Would you recommend this store to family and friends and so on?	☐	☐	☐	☐	☐

	Very unpleasant (1)	Unpleasant (2)	Indifferent (3)	Pleasant (4)	Very Pleasant (5)
11.3 In global, the store environment/ atmosphere looks to you....	☐	☐	☐	☐	☐

12 Statistics data of the questionnaire

12.1 Gender F☐ M☐

12.2 Age _____

In case the customer does not want to give his/her age, please fill according to the ranç

<20 years ☐	36 to 40 years ☐	56 to 60 years ☐
20 to 25 years ☐	41 to 45 years ☐	61 to 65 years ☐
26 to 30 years ☐	46 to 50 years ☐	66 to 70 years ☐
31 to 35 years ☐	51 to 55 years ☐	> 70 years ☐

12.3 Contact _____

Thank you very much for your collaboration!

Store where the questionnaire was done:

Continente Colombo ☐	Modelo Bonjour Campo Grande ☐	Modelo Bonjour Saldanha ☐
Continente Vasco Gama ☐	Modelo Bonjour Quinta Lambert ☐	Modelo Bonjour Santa Quitéria ☐
	Modelo Bonjour Benfica ☐	

Date and time of questionnaire:

Date __/___/2007 Time __:__

7.b ANNEX 2 – FIGURE 13

Figure 13. Distribution of the type of products that subjects buy at the stores

7.c ANNEX 3 - SPSS OUTPUTS FOR H1

Gender

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Gender	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Music1	1	,252	96	,000	,834	96	,000
	2	,216	40	,000	,874	40	,000
FacF_Music2	1	,253	96	,000	,858	96	,000
	2	,266	40	,000	,894	40	,001

a. Lilliefors Significance Correction

Store Format

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Store Format	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Music1	Hiper	,319	75	,000	,685	75	,000
	Super	,136	61	,007	,925	61	,001
FacF_Music2	Hiper	,317	75	,000	,754	75	,000
	Super	,189	61	,000	,926	61	,001

a. Lilliefors Significance Correction

Age Groups

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Music1	Juniors	,309	36	,000	,783	36	,000
	Adults + Seniors	,219	100	,000	,864	100	,000
FacF_Music2	Juniors	,329	36	,000	,843	36	,000
	Adults + Seniors	,228	100	,000	,877	100	,000

a. Lilliefors Significance Correction

Age Groups

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Music1	Adults	,217	86	,000	,893	86	,000
	Juniors + Seniors	,311	50	,000	,760	50	,000
FacF_Music2	Adults	,245	86	,000	,886	86	,000
	Juniors + Seniors	,272	50	,000	,833	50	,000

a. Lilliefors Significance Correction

Age Groups

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Music1	Seniors	,323	14	,000	,790	14	,004
	Juniors + Adults	,230	122	,000	,875	122	,000
FacF_Music2	Seniors	,291	14	,002	,860	14	,030
	Juniors + Adults	,270	122	,000	,875	122	,000

a. Lilliefors Significance Correction

NPar Tests

Mann-Whitney Test

Test Statistics[a]

	Were you aware of the existence of background music at the store?
Mann-Whitney U	8940,000
Wilcoxon W	12595,000
Z	-,410
Asymp. Sig. (2-tailed)	,682

a. Grouping Variable: Gender

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,806
Bartlett's Test of Sphericity	Approx. Chi-Square	444,194
	df	10
	Sig.	,000

Communalities

	Initial	Extraction
The rhythm of the background music is adequate	1,000	,911
The volume at which the music is playing is adequate	1,000	,881
The type of music which is played at the store is the kind of music that I usually listen to	1,000	,788
The background music is pleasant	1,000	,782
The existence of background music increases my well being and comfort	1,000	,882

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,504	70,081	70,081	3,504	70,081	70,081	2,378	47,565	47,565
2	,741	14,812	84,893	,741	14,812	84,893	1,866	37,328	84,893
3	,328	6,564	91,457						
4	,281	5,617	97,073						
5	,146	2,927	100,000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component	
	1	2
The background music is pleasant	,883	
The rhythm of the background music is adequate	,883	-,363
The volume at which the music is playing is adequate	,851	-,396
The type of music which is played at the store is the kind of music that I usually listen to	,822	,336
The existence of background music increases my well being and comfort	,739	,580

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix[a]

	Component	
	1	2
The rhythm of the background music is adequate	,911	,284
The volume at which the music is playing is adequate	,908	,239
The background music is pleasant	,713	,523
The existence of background music increases my well being and comfort	,198	,918
The type of music which is played at the store is the kind of music that I usually listen to	,418	,783

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	,770	,638
2	-,638	,770

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Frequencies

Statistics

Were you aware of the existence of background music at the store?

N	Valid	301
	Missing	0
Mean		1,55
Std. Error of Mean		,029
Median		2,00
Mode		2
Std. Deviation		,499
Variance		,249
Skewness		-,195
Std. Error of Skewness		,140
Kurtosis		-1,975
Std. Error of Kurtosis		,280
Range		1
Minimum		1
Maximum		2
Sum		466

Were you aware of the existence of background music at the store?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	136	45,2	45,2	45,2
	No	165	54,8	54,8	100,0
	Total	301	100,0	100,0	

Crosstabs

Gender * Were you aware of the existence of background music at the store? Crosstabulation

			Were you aware of the existence of background music at the store?		
			Yes	No	Total
Gender	1	Count	96	120	216
		% within Gender	44,4%	55,6%	100,0%
		% within Were you aware of the existence of background music at the store?	70,6%	72,7%	71,8%
		% of Total	31,9%	39,9%	71,8%
	2	Count	40	45	85
		% within Gender	47,1%	52,9%	100,0%
		% within Were you aware of the existence of background music at the store?	29,4%	27,3%	28,2%
		% of Total	13,3%	15,0%	28,2%
Total		Count	136	165	301
		% within Gender	45,2%	54,8%	100,0%
		% within Were you aware of the existence of background music at the store?	100,0%	100,0%	100,0%
		% of Total	45,2%	54,8%	100,0%

Store Format * Were you aware of the existence of background music at the store? Crosstabulation

			Were you aware of the existence of background music at the store?		
			Yes	No	Total
Store Format	Hiper	Count	75	75	150
		% within Store Format	50,0%	50,0%	100,0%
		% within Were you aware of the existence of background music at the store?	55,1%	45,5%	49,8%
		% of Total	24,9%	24,9%	49,8%
	Super	Count	61	90	151
		% within Store Format	40,4%	59,6%	100,0%
		% within Were you aware of the existence of background music at the store?	44,9%	54,5%	50,2%
		% of Total	20,3%	29,9%	50,2%
Total		Count	136	165	301
		% within Store Format	45,2%	54,8%	100,0%
		% within Were you aware of the existence of background music at the store?	100,0%	100,0%	100,0%
		% of Total	45,2%	54,8%	100,0%

Age Groups * Were you aware of the existence of background music at the store? Crosstabulation

			Were you aware of the existence of background music at the store?		
			Yes	No	Total
Age Groups	Juniors	Count	36	49	85
		% within Age Groups	42,4%	57,6%	100,0%
		% within Were you aware of the existence of background music at the store?	26,5%	29,7%	28,2%
		% of Total	12,0%	16,3%	28,2%
	Adults + Seniors	Count	100	116	216
		% within Age Groups	46,3%	53,7%	100,0%
		% within Were you aware of the existence of background music at the store?	73,5%	70,3%	71,8%
		% of Total	33,2%	38,5%	71,8%
Total		Count	136	165	301
		% within Age Groups	45,2%	54,8%	100,0%
		% within Were you aware of the existence of background music at the store?	100,0%	100,0%	100,0%
		% of Total	45,2%	54,8%	100,0%

Age Groups * Were you aware of the existence of background music at the store? Crosstabulation

			Were you aware of the existence of background music at the store?		
			Yes	No	Total
Age Groups	Adults	Count	86	91	177
		% within Age Groups	48,6%	51,4%	100,0%
		% within Were you aware of the existence of background music at the store?	63,2%	55,2%	58,8%
		% of Total	28,6%	30,2%	58,8%
	Juniors + Seniors	Count	50	74	124
		% within Age Groups	40,3%	59,7%	100,0%
		% within Were you aware of the existence of background music at the store?	36,8%	44,8%	41,2%
		% of Total	16,6%	24,6%	41,2%
Total		Count	136	165	301
		% within Age Groups	45,2%	54,8%	100,0%
		% within Were you aware of the existence of background music at the store?	100,0%	100,0%	100,0%
		% of Total	45,2%	54,8%	100,0%

Age Groups * Were you aware of the existence of background music at the store? Crosstabulation

			Were you aware of the existence of background music at the store?		
			Yes	No	Total
Age Groups	Seniors	Count	14	25	39
		% within Age Groups	35,9%	64,1%	100,0%
		% within Were you aware of the existence of background music at the store?	10,3%	15,2%	13,0%
		% of Total	4,7%	8,3%	13,0%
	Juniors + Adults	Count	122	140	262
		% within Age Groups	46,6%	53,4%	100,0%
		% within Were you aware of the existence of background music at the store?	89,7%	84,8%	87,0%
		% of Total	40,5%	46,5%	87,0%
Total		Count	136	165	301
		% within Age Groups	45,2%	54,8%	100,0%
		% within Were you aware of the existence of background music at the store?	100,0%	100,0%	100,0%
		% of Total	45,2%	54,8%	100,0%

NPar Tests

Mann-Whitney Test

Test Statistics[a]

	Were you aware of the existence of background music at the store?
Mann-Whitney U	10237,500
Wilcoxon W	21562,500
Z	-1,671
Asymp. Sig. (2-tailed)	,095

a. Grouping Variable: Formato Loja _ Numerico

Test Statistics[a]

	Were you aware of the existence of background music at the store?
Mann-Whitney U	8818,000
Wilcoxon W	32254,000
Z	-,618
Asymp. Sig. (2-tailed)	,537

a. Grouping Variable: Age Groups

Test Statistics[a]

	Were you aware of the existence of background music at the store?
Mann-Whitney U	10067,000
Wilcoxon W	25820,000
Z	-1,416
Asymp. Sig. (2-tailed)	,157

a. Grouping Variable: Age Groups

Test Statistics[a]

	Were you aware of the existence of background music at the store?
Mann-Whitney U	4564,000
Wilcoxon W	39017,000
Z	-1,247
Asymp. Sig. (2-tailed)	,212

a. Grouping Variable: Age Groups

T-Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Music1	Equal variances assumed	,011	,917	1,009	134	,315	,18992023	,18818022	-,18226745	,56210790
	Equal variances not assumed			1,044	78,808	,300	,18992023	,18197746	-,17231057	,55215102
FacF_Music2	Equal variances assumed	,440	,508	,135	134	,893	,02557337	,18888115	-,34800064	,39914738
	Equal variances not assumed			,147	88,427	,884	,02557337	,17407752	-,32034583	,37149257

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Music1	Equal variances assumed	19,272	,000	3,007	134	,003	,50361659	,16749883	,17233309	,83490010
	Equal variances not assumed			2,877	97,254	,005	,50361659	,17507495	,15615272	,85108047
FacF_Music2	Equal variances assumed	5,543	,020	-,514	134	,608	-,08889128	,17288623	-,43083012	,25304757
	Equal variances not assumed			-,501	111,537	,617	-,08889128	,17738529	-,44037344	,26259088

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Music1	Equal variances assumed	,882	,349	,128	134	,899	,02488104	,19507712	-,36094751	,41070959
	Equal variances not assumed			,139	73,972	,890	,02488104	,17875865	-,33130563	,38106770
FacF_Music2	Equal variances assumed	2,431	,121	,547	134	,586	,10653215	,19487177	-,27889026	,49195455
	Equal variances not assumed			,628	83,243	,532	,10653215	,16966030	-,23090081	,44396511

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Music1	Equal variances assumed	,941	,334	,909	134	,365	,16180630	,17795661	-,19016086	,51377346
	Equal variances not assumed			,865	87,868	,389	,16180630	,18700124	-,20982715	,53343975
FacF_Music2	Equal variances assumed	,012	,912	,443	134	,659	,07898441	,17837427	-,27380881	,43177764
	Equal variances not assumed			,441	101,393	,660	,07898441	,17903694	-,27616003	,43412886

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Music1	Equal variances assumed	8,226	,005	-1,640	134	,103	-,45980025	,28043141	#########	,09484423
	Equal variances not assumed			-1,062	13,985	,306	-,45980025	,43306488	#########	,46912757
FacF_Music2	Equal variances assumed	1,663	,199	-1,507	134	,134	-,42338918	,28085897	-,97887929	,13210093
	Equal variances not assumed			-1,090	14,337	,294	-,42338918	,38836766	#########	,40774597

NPar Tests

Mann-Whitney Test

Test Statistics[a]

	FacF_Music1	FacF_Music2
Mann-Whitney U	1723,500	1892,500
Wilcoxon W	2543,500	2712,500
Z	-,972	-,136
Asymp. Sig. (2-tailed)	,331	,892

a. Grouping Variable: Gender

Test Statistics[a]

	FacF_Music1	FacF_Music2
Mann-Whitney U	1643,000	1996,000
Wilcoxon W	3534,000	4846,000
Z	-2,920	-1,321
Asymp. Sig. (2-tailed)	,004	,187

a. Grouping Variable: Formato Loja _ Numerico

Test Statistics[a]

	FacF_Music1	FacF_Music2
Mann-Whitney U	1640,500	1686,500
Wilcoxon W	6690,500	6736,500
Z	-,815	-,580
Asymp. Sig. (2-tailed)	,415	,562

a. Grouping Variable: Age Groups

Test Statistics[a]

	FacF_Music1	FacF_Music2
Mann-Whitney U	2144,000	2045,000
Wilcoxon W	3419,000	3320,000
Z	-,028	-,491
Asymp. Sig. (2-tailed)	,978	,624

a. Grouping Variable: Age Groups

Test Statistics[a]

	FacF_Music1	FacF_Music2
Mann-Whitney U	688,500	635,500
Wilcoxon W	793,500	740,500
Z	-1,227	-1,620
Asymp. Sig. (2-tailed)	,220	,105

a. Grouping Variable: Age Groups

7.d ANNEX 4 - SPSS OUTPUTS FOR H2

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,557
Bartlett's Test of Sphericity	Approx. Chi-Square	24,757
	df	3
	Sig.	,000

Communalities

	Initial	Extraction
The aroma or odour is present all over the store	1,000	,999
You fell a pleasant and fresh aroma inside the store	1,000	,794
The presence of a pleasant/fresh aroma increases my well being and comfort	1,000	,804

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,729	57,628	57,628	1,729	57,628	57,628	1,587	52,899	52,899
2	,869	28,958	86,586	,869	28,958	86,586	1,011	33,688	86,586
3	,402	13,414	100,000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component	
	1	2
You fell a pleasant and fresh aroma inside the store	,862	-,227
The presence of a pleasant/fresh aroma increases my well being and comfort	,849	-,289
The aroma or odour is present all over the store	,516	,856

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix[a]

	Component	
	1	2
The presence of a pleasant/fresh aroma increases my well being and comfort	,893	
You fell a pleasant and fresh aroma inside the store	,880	,142
The aroma or odour is present all over the store	,123	,992

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	,914	,406
2	-,406	,914

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Gender

Tests of Normality[b,c]

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Gender	Statistic	df	Sig.	Statistic	df	Sig.
Can you identify the origin of that odour or aroma?	1	,536	40	,000	,292	40	,000
	2	,530	12	,000	,327	12	,000
FacF_V2_Aroma 1	1	,221	40	,000	,819	40	,000
	2	,206	12	,168	,951	12	,653
FacF_V2_Aroma 2	1	,234	40	,000	,881	40	,001
	2	,371	12	,000	,781	12	,006

a. Lilliefors Significance Correction

b. Were you aware of the existence of any odour or aroma in the store? is constant when Gender = 1. It has been omitted.

c. Were you aware of the existence of any odour or aroma in the store? is constant when Gender = 2. It has been omitted.

Store Format

Tests of Normality[b],c

	Store Format	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Can you identify the origin of that odour or aroma?	Hiper	,539	26	,000	,198	26	,000
	Super	,523	26	,000	,376	26	,000
FacF_V2_Aroma 1	Hiper	,267	26	,000	,895	26	,012
	Super	,228	26	,001	,853	26	,002
FacF_V2_Aroma 2	Hiper	,343	26	,000	,773	26	,000
	Super	,184	26	,024	,906	26	,021

a. Lilliefors Significance Correction

b. Were you aware of the existence of any odour or aroma in the store? is constant when Store Format = Hiper. It has been omitted.
c. Were you aware of the existence of any odour or aroma in the store? is constant when Store Format = Super. It has been omitted.

Age Groups

Tests of Normality[b],c

	Age Groups	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Can you identify the origin of that odour or aroma?	Juniors	,530	12	,000	,327	12	,000
	Adults + Seniors	,536	40	,000	,292	40	,000
FacF_V2_Aroma 1	Juniors	,303	12	,003	,861	12	,050
	Adults + Seniors	,200	40	,000	,847	40	,000
FacF_V2_Aroma 2	Juniors	,311	12	,002	,773	12	,005
	Adults + Seniors	,245	40	,000	,872	40	,000

a.Lilliefors Significance Correction

b.Were you aware of the existence of any odour or aroma in the store? is constant when Age Groups = Juniors. It has been omitted.
c.Were you aware of the existence of any odour or aroma in the store? is constant when Age Groups = Adults + Seniors. It has been omitted.

Tests of Normality[b],c

	Age Groups	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Can you identify the origin of that odour or aroma?	Adults	,531	33	,000	,328	33	,000
	Juniors + Seniors	,538	19	,000	,244	19	,000
FacF_V2_Aroma 1	Adults	,188	33	,004	,891	33	,003
	Juniors + Seniors	,314	19	,000	,788	19	,001
FacF_V2_Aroma 2	Adults	,271	33	,000	,869	33	,001
	Juniors + Seniors	,262	19	,001	,830	19	,003

a.Lilliefors Significance Correction

b.Were you aware of the existence of any odour or aroma in the store? is constant when Age Groups = Adults. It has been omitted.
c.Were you aware of the existence of any odour or aroma in the store? is constant when Age Groups = Juniors + Seniors. It has been omitted.

Tests of Normality[b],c,d

	Age Groups	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Can you identify the origin of that odour or aroma?	Juniors + Adults	,532	45	,000	,322	45	,000
FacF_V2_Aroma 1	Seniors	,330	7	,020	,819	7	,062
	Juniors + Adults	,193	45	,000	,895	45	,001
FacF_V2_Aroma 2	Seniors	,269	7	,135	,913	7	,415
	Juniors + Adults	,292	45	,000	,860	45	,000

a.Lilliefors Significance Correction

b.Were you aware of the existence of any odour or aroma in the store? is constant when Age Groups = Seniors. It has been omitted.
c.Were you aware of the existence of any odour or aroma in the store? is constant when Age Groups = Juniors + Adults. It has been omitted.
d.Can you identify the origin of that odour or aroma? is constant when Age Groups = Seniors. It has been omitted.

T-Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_Aroma1	Equal variances assumed	,262	,611	-,686	50	,496	-,22687086	,33086340	-,89142957	,43768784
	Equal variances not assumed			-,773	22,306	,448	-,22687086	,29345197	-,83496890	,38122717
FacF_V2_Aroma2	Equal variances assumed	1,962	,167	1,041	50	,303	,34227492	,32887225	-,31828443	1,00283428
	Equal variances not assumed			1,146	21,331	,264	,34227492	,29854814	-,27800364	,96255348

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_Aroma1	Equal variances assumed	4,292	,043	2,142	50	,037	,57423572	,26807948	,03578224	1,11268919
	Equal variances not assumed			2,142	38,547	,039	,57423572	,26807948	,03179020	1,11668124
FacF_V2_Aroma2	Equal variances assumed	9,044	,004	-3,338	50	,002	-,84551902	,25330513	-1,35429735	-,33674069
	Equal variances not assumed			-3,338	44,914	,002	-,84551902	,25330513	-1,35572863	-,33530940

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_Aroma1	Equal variances assumed	1,059	,308	,832	50	,410	,27455435	,33013997	-,38855129	,93765999
	Equal variances not assumed			1,027	27,195	,313	,27455435	,26728270	-,27368036	,82278906
FacF_V2_Aroma2	Equal variances assumed	3,037	,088	-2,287	50	,026	-,72345250	,31627888	-1,35871733	-,08818768
	Equal variances not assumed			-2,609	22,824	,016	-,72345250	,27731026	-1,29735692	-,14954808

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_Aroma1	Equal variances assumed	,970	,329	,406	50	,687	,11786229	,29037126	-,46536556	,70109013
	Equal variances not assumed			,375	29,504	,711	,11786229	,31468952	-,52527312	,76099769
FacF_V2_Aroma2	Equal variances assumed	1,113	,297	1,571	50	,122	,44615752	,28392283	-,12411826	1,01643329
	Equal variances not assumed			1,582	38,412	,122	,44615752	,28209566	-,12471425	1,01702928

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_Aroma1	Equal variances assumed	9,235	,004	-1,633	50	,109	-,65297061	,39981688	-1,45602645	,15008524
	Equal variances not assumed			-,995	6,460	,355	-,65297061	,65617521	-2,23126438	,92532317
FacF_V2_Aroma2	Equal variances assumed	,122	,729	,524	50	,603	,21433790	,40922138	-,60760743	1,03628323
	Equal variances not assumed			,473	7,488	,650	,21433790	,45328176	-,84350355	1,27217935

NPar Tests

Mann-Whitney Test

Test Statistics[a]

	Were you aware of the existence of any odour or aroma in the store?	Can you identify the origin of that odour or aroma?	FacF_V2_Aroma 1	FacF_V2_Aroma 2
Mann-Whitney U	8733,500	243,500	224,000	181,000
Wilcoxon W	32169,500	1104,500	1044,000	259,000
Z	-,996	-,116	-,353	-1,303
Asymp. Sig. (2-tailed)	,319	,908	,724	,192

a. Grouping Variable: Gender

Test Statistics[a]

	Were you aware of the existence of any odour or aroma in the store?	Can you identify the origin of that odour or aroma?	FacF_V2_Aroma 1	FacF_V2_Aroma 2
Mann-Whitney U	11263,000	325,500	213,000	141,000
Wilcoxon W	22739,000	676,500	564,000	492,000
Z	-,124	-,991	-2,327	-3,667
Asymp. Sig. (2-tailed)	,901	,321	,020	,000

a. Grouping Variable: Store Format

Test Statistics[a]

	Were you aware of the existence of any odour or aroma in the store?	Can you identify the origin of that odour or aroma?	FacF_V2_Aroma 1	FacF_V2_Aroma 2
Mann-Whitney U	8733,500	243,500	190,000	123,000
Wilcoxon W	32169,500	1104,500	1010,000	201,000
Z	-,996	-,116	-1,104	-2,584
Asymp. Sig. (2-tailed)	,319	,908	,269	,010

a. Grouping Variable: Age Groups

Test Statistics[a]

	Were you aware of the existence of any odour or aroma in the store?	Can you identify the origin of that odour or aroma?	FacF_V2_Aroma 1	FacF_V2_Aroma 2
Mann-Whitney U	10698,000	316,500	284,000	222,000
Wilcoxon W	26451,000	526,500	845,000	412,000
Z	-,563	-,541	-,570	-1,768
Asymp. Sig. (2-tailed)	,573	,588	,569	,077

a. Grouping Variable: Age Groups

Test Statistics[b]

	Were you aware of the existence of any odour or aroma in the store?	Can you identify the origin of that odour or aroma?	FacF_V2_Aroma 1	FacF_V2_Aroma 2
Mann-Whitney U	4938,500	164,000	137,000	132,000
Wilcoxon W	5718,500	200,000	165,000	1167,000
Z	-,510	-,869	-,559	-,695
Asymp. Sig. (2-tailed)	,610	,385	,576	,487
Exact Sig. [2*(1-tailed Sig.)]		,705[a]	,599[a]	,511[a]

a. Not corrected for ties.

b. Grouping Variable: Age Groups

Means

Report

Mean

Store Format	FacF_V2_Aroma 1	FacF_V2_Aroma 2
Hiper	,2871179	-,4227595
Super	-,2871179	,4227595
Total	,0000000	,0000000

Report

Mean

Age Groups	FacF_V2_Aroma 2
Juniors	-,5565019
Adults + Seniors	,1669506
Total	,0000000

Frequencies

Frequency Table

Were you aware of the existence of any odour or aroma in the store?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	53	17,6	17,6	17,6
	No	248	82,4	82,4	100,0
	Total	301	100,0	100,0	

Can you identify the origin of that odour or aroma?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	49	16,3	92,5	92,5
	No	4	1,3	7,5	100,0
	Total	53	17,6	100,0	
Missing	System	248	82,4		
Total		301	100,0		

Crosstabs

Gender * Were you aware of the existence of any odour or aroma in the store? Crosstabulation

			Were you aware of the existence of any odour or aroma in the store?		
			Yes	No	Total
Gender	1	Count	41	175	216
		% within Gender	19,0%	81,0%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	77,4%	70,6%	71,8%
		% of Total	13,6%	58,1%	71,8%
	2	Count	12	73	85
		% within Gender	14,1%	85,9%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	22,6%	29,4%	28,2%
		% of Total	4,0%	24,3%	28,2%
Total		Count	53	248	301
		% within Gender	17,6%	82,4%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	100,0%	100,0%	100,0%
		% of Total	17,6%	82,4%	100,0%

Gender * Can you identify the origin of that odour or aroma? Crosstabulation

	Can you identify the origin of that odour	Total

			or aroma?		
			Yes	No	
Gender	1	Count	38	3	41
		% within Gender	92,7%	7,3%	100,0%
		% within Can you identify the origin of that odour or aroma?	77,6%	75,0%	77,4%
		% of Total	71,7%	5,7%	77,4%
	2	Count	11	1	12
		% within Gender	91,7%	8,3%	100,0%
		% within Can you identify the origin of that odour or aroma?	22,4%	25,0%	22,6%
		% of Total	20,8%	1,9%	22,6%
Total		Count	49	4	53
		% within Gender	92,5%	7,5%	100,0%
		% within Can you identify the origin of that odour or aroma?	100,0%	100,0%	100,0%
		% of Total	92,5%	7,5%	100,0%

Store Format * Were you aware of the existence of any odour or aroma in the store? Crosstabulation

			Were you aware of the existence of any odour or aroma in the store?		
			Yes	No	Total
Store Format	Hiper	Count	26	124	150
		% within Store Format	17,3%	82,7%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	49,1%	50,0%	49,8%
		% of Total	8,6%	41,2%	49,8%
	Super	Count	27	124	151
		% within Store Format	17,9%	82,1%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	50,9%	50,0%	50,2%
		% of Total	9,0%	41,2%	50,2%
Total		Count	53	248	301
		% within Store Format	17,6%	82,4%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	100,0%	100,0%	100,0%
		% of Total	17,6%	82,4%	100,0%

Store Format * Can you identify the origin of that odour or aroma? Crosstabulation

			Can you identify the origin of that odour or aroma?		
			Yes	No	Total
Store Format	Hiper	Count	25	1	26
		% within Store Format	96,2%	3,8%	100,0%
		% within Can you identify the origin of that odour or aroma?	51,0%	25,0%	49,1%
		% of Total	47,2%	1,9%	49,1%
	Super	Count	24	3	27
		% within Store Format	88,9%	11,1%	100,0%
		% within Can you identify the origin of that odour or aroma?	49,0%	75,0%	50,9%
		% of Total	45,3%	5,7%	50,9%
Total		Count	49	4	53
		% within Store Format	92,5%	7,5%	100,0%
		% within Can you identify the origin of that odour or aroma?	100,0%	100,0%	100,0%
		% of Total	92,5%	7,5%	100,0%

Age Groups * Were you aware of the existence of any odour or aroma in the store? Crosstabulation

			Were you aware of the existence of any odour or aroma in the store?		
			Yes	No	Total
Age Groups	Juniors	Count	12	73	85
		% within Age Groups	14,1%	85,9%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	22,6%	29,4%	28,2%
		% of Total	4,0%	24,3%	28,2%
	Adults + Seniors	Count	41	175	216
		% within Age Groups	19,0%	81,0%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	77,4%	70,6%	71,8%
		% of Total	13,6%	58,1%	71,8%
Total		Count	53	248	301
		% within Age Groups	17,6%	82,4%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	100,0%	100,0%	100,0%
		% of Total	17,6%	82,4%	100,0%

Age Groups * Can you identify the origin of that odour or aroma? Crosstabulation

			Can you identify the origin of that odour or aroma?		
			Yes	No	Total
Age Groups	Juniors	Count	11	1	12
		% within Age Groups	91,7%	8,3%	100,0%
		% within Can you identify the origin of that odour or aroma?	22,4%	25,0%	22,6%
		% of Total	20,8%	1,9%	22,6%
	Adults + Seniors	Count	38	3	41
		% within Age Groups	92,7%	7,3%	100,0%
		% within Can you identify the origin of that odour or aroma?	77,6%	75,0%	77,4%
		% of Total	71,7%	5,7%	77,4%
Total		Count	49	4	53
		% within Age Groups	92,5%	7,5%	100,0%
		% within Can you identify the origin of that odour or aroma?	100,0%	100,0%	100,0%
		% of Total	92,5%	7,5%	100,0%

Age Groups * Were you aware of the existence of any odour or aroma in the store? Crosstabulation

			Were you aware of the existence of any odour or aroma in the store?		
			Yes	No	Total
Age Groups	Adults	Count	33	144	177
		% within Age Groups	18,6%	81,4%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	62,3%	58,1%	58,8%
		% of Total	11,0%	47,8%	58,8%
	Juniors + Seniors	Count	20	104	124
		% within Age Groups	16,1%	83,9%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	37,7%	41,9%	41,2%
		% of Total	6,6%	34,6%	41,2%
Total		Count	53	248	301
		% within Age Groups	17,6%	82,4%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	100,0%	100,0%	100,0%
		% of Total	17,6%	82,4%	100,0%

Age Groups * Can you identify the origin of that odour or aroma? Crosstabulation

			Can you identify the origin of that odour or aroma?		
			Yes	No	Total
Age Groups	Adults	Count	30	3	33
		% within Age Groups	90,9%	9,1%	100,0%
		% within Can you identify the origin of that odour or aroma?	61,2%	75,0%	62,3%
		% of Total	56,6%	5,7%	62,3%
	Juniors + Seniors	Count	19	1	20
		% within Age Groups	95,0%	5,0%	100,0%
		% within Can you identify the origin of that odour or aroma?	38,8%	25,0%	37,7%
		% of Total	35,8%	1,9%	37,7%
Total		Count	49	4	53
		% within Age Groups	92,5%	7,5%	100,0%
		% within Can you identify the origin of that odour or aroma?	100,0%	100,0%	100,0%
		% of Total	92,5%	7,5%	100,0%

Age Groups * Were you aware of the existence of any odour or aroma in the store? Crosstabulation

			Were you aware of the existence of any odour or aroma in the store?		
			Yes	No	Total
Age Groups	Seniors	Count	8	31	39
		% within Age Groups	20,5%	79,5%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	15,1%	12,5%	13,0%
		% of Total	2,7%	10,3%	13,0%
	Juniors + Adults	Count	45	217	262
		% within Age Groups	17,2%	82,8%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	84,9%	87,5%	87,0%
		% of Total	15,0%	72,1%	87,0%
Total		Count	53	248	301
		% within Age Groups	17,6%	82,4%	100,0%
		% within Were you aware of the existence of any odour or aroma in the store?	100,0%	100,0%	100,0%
		% of Total	17,6%	82,4%	100,0%

Age Groups * Can you identify the origin of that odour or aroma? Crosstabulation

			Can you identify the origin of that odour or aroma?		
			Yes	No	Total
Age Groups	Seniors	Count	8	0	8
		% within Age Groups	100,0%	,0%	100,0%
		% within Can you identify the origin of that odour or aroma?	16,3%	,0%	15,1%
		% of Total	15,1%	,0%	15,1%
	Juniors + Adults	Count	41	4	45
		% within Age Groups	91,1%	8,9%	100,0%
		% within Can you identify the origin of that odour or aroma?	83,7%	100,0%	84,9%
		% of Total	77,4%	7,5%	84,9%
Total		Count	49	4	53
		% within Age Groups	92,5%	7,5%	100,0%
		% within Can you identify the origin of that odour or aroma?	100,0%	100,0%	100,0%
		% of Total	92,5%	7,5%	100,0%

7.e ANNEX 5 - SPSS OUTPUTS FOR H3

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,702
Bartlett's Test of Sphericity	Approx. Chi-Square	239,616
	df	6
	Sig.	,000

Communalities

	Initial	Extraction
The store's floor has no garbage and it is clean	1,000	,634
The shelves and fridges are clean	1,000	,719
The store is clean, the products are tidy and not damaged	1,000	,689
The fact that the store is clean and tidy increases my well being and comfort	1,000	,993

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,107	52,686	52,686	2,107	52,686	52,686	2,013	50,337	50,337
2	,928	23,193	75,879	,928	23,193	75,879	1,022	25,542	75,879
3	,550	13,749	89,628						
4	,415	10,372	100,000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component	
	1	2
The shelves and fridges are clean	,845	
The store is clean, the products are tidy and not damaged	,815	-,155
The store's floor has no garbage and it is clean	,766	-,216
The fact that the store is clean and tidy increases my well being and comfort	,375	,924

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix[a]

	Component	
	1	2
The shelves and fridges are clean	,829	,177
The store is clean, the products are tidy and not damaged	,826	
The store's floor has no garbage and it is clean	,796	
The fact that the store is clean and tidy increases my well being and comfort		,992

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	,959	,282
2	-,282	,959

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Gender

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Gender	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Cleanliness1	1	,269	215	,000	,791	215	,000
	2	,299	85	,000	,749	85	,000
FacF_Cleanliness2	1	,305	215	,000	,698	215	,000
	2	,340	85	,000	,647	85	,000

a. Lilliefors Significance Correction

Store Format

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Store Format	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Cleanliness1	Hiper	,336	149	,000	,767	149	,000
	Super	,264	151	,000	,783	151	,000
FacF_Cleanliness2	Hiper	,380	149	,000	,605	149	,000
	Super	,302	151	,000	,735	151	,000

a. Lilliefors Significance Correction

Age Groups

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Cleanliness1	Juniors	,306	84	,000	,804	84	,000
	Adults + Seniors	,275	216	,000	,775	216	,000
FacF_Cleanliness2	Juniors	,368	84	,000	,634	84	,000
	Adults + Seniors	,295	216	,000	,701	216	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Cleanliness1	Adults	,274	177	,000	,764	177	,000
	Juniors + Seniors	,301	123	,000	,808	123	,000
FacF_Cleanliness2	Adults	,314	177	,000	,701	177	,000
	Juniors + Seniors	,313	123	,000	,667	123	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Cleanliness1	Seniors	,312	39	,000	,798	39	,000
	Juniors + Adults	,272	261	,000	,769	261	,000
FacF_Cleanliness2	Seniors	,379	39	,000	,685	39	,000
	Juniors + Adults	,321	261	,000	,684	261	,000

a. Lilliefors Significance Correction

T-Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Cleanliness1	Equal variances assumed	5,873	,016	-1,444	298	,150	-,18465001	,12789269	-,43633727	,06703724
	Equal variances not assumed			-1,611	197,787	,109	-,18465001	,11460899	-,41066243	,04136241
FacF_Cleanliness2	Equal variances assumed	,459	,499	-,213	298	,832	-,02727197	,12832950	-,27981883	,22527490
	Equal variances not assumed			-,230	183,685	,818	-,02727197	,11859047	-,26124656	,20670263

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Cleanliness1	Equal variances assumed	,023	,878	,644	298	,520	,07448079	,11558571	-,15298685	,30194843
	Equal variances not assumed			,645	297,459	,520	,07448079	,11554243	-,15290337	,30186495
FacF_Cleanliness2	Equal variances assumed	1,681	,196	,180	298	,857	,02087053	,11565988	-,20674310	,24848415
	Equal variances not assumed			,181	281,289	,857	,02087053	,11546147	-,20640769	,24814874

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Cleanliness1	Equal variances assumed	3,564	,060	,517	298	,605	,06657708	,12874394	-,18678539	,31993955
	Equal variances not assumed			,595	208,912	,552	,06657708	,11181485	-,15385297	,28700713
FacF_Cleanliness2	Equal variances assumed	,074	,786	,410	298	,682	,05278867	,12876539	-,20061602	,30619335
	Equal variances not assumed			,439	175,519	,661	,05278867	,12024485	-,18452319	,29010052

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Cleanliness1	Equal variances assumed	3,342	,069	-1,434	298	,153	-,16803853	,11718057	-,39864479	,06256773
	Equal variances not assumed			-1,494	292,791	,136	-,16803853	,11245181	-,38935487	,05327781
FacF_Cleanliness2	Equal variances assumed	,261	,610	,937	298	,350	,11001560	,11741135	-,12104483	,34107602
	Equal variances not assumed			,927	252,711	,355	,11001560	,11863825	-,12363005	,34366124

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Cleanliness1	Equal variances assumed	,163	,686	1,405	298	,161	,24073016	,17139684	-,09657137	,57803169
	Equal variances not assumed			1,377	49,396	,175	,24073016	,17476234	-,11039676	,59185708
FacF_Cleanliness2	Equal variances assumed	,112	,738	-1,927	298	,055	-,32939848	,17090125	-,66572471	,00692776
	Equal variances not assumed			-1,550	44,486	,128	-,32939848	,21246963	-,75747086	,09867391

NPar Tests

Mann-Whitney Test

Test Statistics[a]

	FacF_Cleanliness1	FacF_Cleanliness2
Mann-Whitney U	8324,000	8626,000
Wilcoxon W	31544,000	12281,000
Z	-1,309	-,823
Asymp. Sig. (2-tailed)	,190	,410

a. Grouping Variable: Gender

Test Statistics[a]

	FacF_Cleanliness1	FacF_Cleanliness2
Mann-Whitney U	10102,000	10077,000
Wilcoxon W	21578,000	21252,000
Z	-1,665	-1,701
Asymp. Sig. (2-tailed)	,096	,089

a. Grouping Variable: Store Format

Test Statistics[a]

	FacF_Cleanliness1	FacF_Cleanliness2
Mann-Whitney U	8978,000	8848,000
Wilcoxon W	32414,000	12418,000
Z	-,152	-,362
Asymp. Sig. (2-tailed)	,879	,717

a. Grouping Variable: Age Groups

Test Statistics[a]

	FacF_Cleanliness1	FacF_Cleanliness2
Mann-Whitney U	10001,500	9959,500
Wilcoxon W	25754,500	17585,500
Z	-1,304	-1,366
Asymp. Sig. (2-tailed)	,192	,172

a. Grouping Variable: Age Groups

Test Statistics[a]

	FacF_Cleanliness1	FacF_Cleanliness2
Mann-Whitney U	4299,500	4387,500
Wilcoxon W	38490,500	5167,500
Z	-1,704	-1,514
Asymp. Sig. (2-tailed)	,088	,130

a. Grouping Variable: Age Groups

7.f ANEXO 6 - SPSS OUTPUTS FOR H4

Crosstabs

FacF_Cleanliness1 * FacF_V2_Aroma 1

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	,344	,098	2,589	,013[c]
Ordinal by Ordinal	Spearman Correlation	,357	,131	2,699	,009[c]
N of Valid Cases		52			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

FacF_ Cleanliness1 * FacF_V2_Aroma 2

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	,197	,139	1,424	,161[c]
Ordinal by Ordinal	Spearman Correlation	-,067	,160	-,472	,639[c]
N of Valid Cases		52			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

FacF_ Cleanliness2 * FacF_V2_Aroma 1

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	,345	,175	2,603	,012[c]
Ordinal by Ordinal	Spearman Correlation	-,073	,156	-,520	,605[c]
N of Valid Cases		52			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

FacF_ Cleanliness2 * FacF_V2_Aroma 2

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	,257	,124	1,879	,066[c]
Ordinal by Ordinal	Spearman Correlation	,224	,142	1,623	,111[c]
N of Valid Cases		52			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

7.g ANNEX 7 - SPSS OUTPUTS FOR H5

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,675
Bartlett's Test of Sphericity	Approx. Chi-Square	418,251
	df	10
	Sig.	,000

Communalities

	Initial	Extraction
The light in the areas of fresh goods allows me to evaluate the quality of the products	1,000	,634
The light at the corners of the store (more hidden areas) is sufficient	1,000	,772
The general light in the store is sufficient	1,000	,665
The fact that lighting is adequate and different in each area inside the store is important for the beauty and comfort of the purchase act	1,000	,732
The bigger the clarity / luminosity increases my well being and comfort	1,000	,810

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,549	50,971	50,971	2,549	50,971	50,971	2,054	41,090	41,090
2	1,064	21,276	72,247	1,064	21,276	72,247	1,558	31,157	72,247
3	,551	11,018	83,265						
4	,530	10,600	93,865						
5	,307	6,135	100,000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component	
	1	2
The light at the corners of the store (more hidden areas) is sufficient	,784	-,397
The general light in the store is sufficient	,778	-,244
The light in the areas of fresh goods allows me to evaluate the quality of the products	,714	-,352
The fact that lighting is adequate and different in each area inside the store is important for the beauty and comfort of the purchase act	,685	,513
The bigger the clarity / luminosity increases my well being and comfort	,592	,678

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix[a]

	Component	
	1	2
The light at the corners of the store (more hidden areas) is sufficient	,869	,128
The light in the areas of fresh goods allows me to evaluate the quality of the products	,786	,124
The general light in the store is sufficient	,776	,249
The bigger the clarity / luminosity increases my well being and comfort		,895
The fact that lighting is adequate and different in each area inside the store is important for the beauty and comfort of the purchase act	,264	,814

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	,817	,577
2	-,577	,817

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Gender

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Gender	Statistic	df	Sig.	Statistic	df	Sig.
FacF_V2_Lighting 1	1	,363	215	,000	,703	215	,000
	2	,379	84	,000	,767	84	,000
FacF_V2_Lighting 2	1	,375	215	,000	,572	215	,000
	2	,366	84	,000	,712	84	,000

a. Lilliefors Significance Correction

Store Format

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Store Format	Statistic	df	Sig.	Statistic	df	Sig.
FacF_V2_Lighting 1	Hiper	,361	148	,000	,678	148	,000
	Super	,367	151	,000	,762	151	,000
FacF_V2_Lighting 2	Hiper	,389	148	,000	,591	148	,000
	Super	,351	151	,000	,694	151	,000

a. Lilliefors Significance Correction

Age Groups

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_V2_Lighting 1	Juniors	,391	84	,000	,670	84	,000
	Adults + Seniors	,362	215	,000	,752	215	,000
FacF_V2_Lighting 2	Juniors	,400	84	,000	,664	84	,000
	Adults + Seniors	,359	215	,000	,592	215	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_V2_Lighting 1	Adults	,374	176	,000	,721	176	,000
	Juniors + Seniors	,370	123	,000	,730	123	,000
FacF_V2_Lighting 2	Adults	,380	176	,000	,540	176	,000
	Juniors + Seniors	,358	123	,000	,712	123	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_V2_Lighting 1	Seniors	,320	39	,000	,831	39	,000
	Juniors + Adults	,380	260	,000	,713	260	,000
FacF_V2_Lighting 2	Seniors	,300	39	,000	,789	39	,000
	Juniors + Adults	,387	260	,000	,594	260	,000

a. Lilliefors Significance Correction

T-Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_Lighting 1	Equal variances assumed	12,782	,000	3,200	297	,002	,40549003	,12672040	,15610638	,65487368
	Equal variances not assumed			3,042	137,364	,003	,40549003	,13328396	,14193639	,66904366
FacF_V2_Lighting 2	Equal variances assumed	,805	,370	1,891	297	,060	,24224497	,12811746	-,00988809	,49437802
	Equal variances not assumed			1,959	163,432	,052	,24224497	,12363405	-,00188105	,48637098

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_ Lighting 1	Equal variances assumed	20,494	,000	3,595	297	,000	,40773058	,11342212	,18451773	,63094344
	Equal variances not assumed			3,602	286,870	,000	,40773058	,11318528	,18495163	,63050954
FacF_V2_ Lighting 2	Equal variances assumed	,819	,366	-,110	297	,913	-,01274084	,11586102	-,24075341	,21527173
	Equal variances not assumed			-,110	258,655	,913	-,01274084	,11628901	-,24173458	,21625290

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_ Lighting 1	Equal variances assumed	2,643	,105	1,254	297	,211	,16120676	,12854637	-,09177037	,41418389
	Equal variances not assumed			1,284	159,299	,201	,16120676	,12552398	-,08669905	,40911257
FacF_V2_ Lighting 2	Equal variances assumed	,827	,364	-1,341	297	,181	-,17231781	,12849782	-,42519941	,08056379
	Equal variances not assumed			-1,319	146,670	,189	-,17231781	,13060328	-,43042519	,08578956

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_ Lighting 1	Equal variances assumed	,230	,632	-1,335	297	,183	-,15667609	,11737015	-,38765862	,07430643
	Equal variances not assumed			-1,315	248,450	,190	-,15667609	,11911629	-,39128256	,07793037
FacF_V2_ Lighting 2	Equal variances assumed	,940	,333	,360	297	,719	,04232664	,11769610	-,18929735	,27395062
	Equal variances not assumed			,358	258,746	,721	,04232664	,11818815	-,19040648	,27505975

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_Lighting 1	Equal variances assumed	1,878	,172	,275	297	,783	,04736983	,17198520	-,29109421	,38583386
	Equal variances not assumed			,231	45,327	,818	,04736983	,20517167	-,36578491	,46052456
FacF_V2_Lighting 2	Equal variances assumed	1,913	,168	1,262	297	,208	,21654563	,17154760	-,12105721	,55414848
	Equal variances not assumed			1,292	50,917	,202	,21654563	,16760248	-,11994368	,55303495

NPar Tests

Mann-Whitney Test

Test Statistics[a]

	FacF_V2_Lighting 1	FacF_V2_Lighting 2
Mann-Whitney U	7646,000	8029,000
Wilcoxon W	11216,000	11599,000
Z	-2,477	-1,791
Asymp. Sig. (2-tailed)	,013	,073

a. Grouping Variable: Gender

Test Statistics[a]

	FacF_V2_Lighting 1	FacF_V2_Lighting 2
Mann-Whitney U	9073,500	11055,500
Wilcoxon W	20549,500	22081,500
Z	-3,379	-,191
Asymp. Sig. (2-tailed)	,001	,849

a. Grouping Variable: Store Format

Test Statistics[a]

	FacF_V2_Lighting 1	FacF_V2_Lighting 2
Mann-Whitney U	8285,500	7947,500
Wilcoxon W	31505,500	11517,500
Z	-1,332	-1,937
Asymp. Sig. (2-tailed)	,183	,053

a. Grouping Variable: Age Groups

Test Statistics[a]

	FacF_V2_Lighting 1	FacF_V2_Lighting 2
Mann-Whitney U	9807,000	10121,000
Wilcoxon W	25383,000	17747,000
Z	-1,662	-1,149
Asymp. Sig. (2-tailed)	,096	,251

a. Grouping Variable: Age Groups

Test Statistics[a]

	FacF_V2_Lighting 1	FacF_V2_Lighting 2
Mann-Whitney U	4797,500	4690,500
Wilcoxon W	38727,500	38620,500
Z	-,651	-,906
Asymp. Sig. (2-tailed)	,515	,365

a. Grouping Variable: Age Groups

Means

FacF_V2_Lighting 1 * Gender

FacF_V2_Lighting 1

Gender	Mean	N	Std. Deviation
1	,1139169	215	,95099946
2	-,2915731	84	1,06718347
Total	,0000000	299	1,00000000

FacF_V2_Lighting 1 * Store Format

FacF_V2_Lighting 1

Store Format	Mean	N	Std. Deviation
Hiper	,2059108	148	,87194725
Super	-,2018198	151	1,07644962
Total	,0000000	299	1,00000000

7.h ANNEX 8 - SPSS OUTPUTS FOR H6

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,390
Bartlett's Test of Sphericity	Approx. Chi-Square	75,400
	df	6
	Sig.	,000

Communalities

	Initial	Extraction
The temperature near the fridge areas is adequate	1,000	,808
The temperature near the surroundings areas is adequate	1,000	,319
The temperature levels in the corridors being uniform is important for the comfort of the purchase	1,000	,611
The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort	1,000	,827

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,366	34,142	34,142	1,366	34,142	34,142	1,356	33,910	33,910
2	1,200	29,992	64,134	1,200	29,992	64,134	1,209	30,224	64,134
3	,921	23,026	87,160						
4	,514	12,840	100,000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component	
	1	2
The temperature levels in the corridors being uniform is important for the comfort of the purchase	,773	,119
The temperature near the fridge areas is adequate	,681	-,587
The temperature near the surroundings areas is adequate	,511	,240
The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort	,210	,885

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix[a]

	Component

	1	2
The temperature levels in the corridors being uniform is important for the comfort of the purchase	,779	
The temperature near the surroundings areas is adequate	,553	,112
The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort	,413	,810
The temperature near the fridge areas is adequate	,523	-,731

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	,972	-,236
2	,236	,972

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Gender

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Gender	Statistic	df	Sig.	Statistic	df	Sig.
The temperature near the fridge areas is adequate	1	,354	215	,000	,777	215	,000
	2	,280	84	,000	,824	84	,000
The temperature near the surroundings areas is adequate	1	,448	215	,000	,599	215	,000
	2	,399	84	,000	,710	84	,000
The temperature levels in the corridors being uniform is important for the comfort of the purchase	1	,357	215	,000	,787	215	,000
	2	,348	84	,000	,760	84	,000
The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort	1	,377	215	,000	,755	215	,000
	2	,366	84	,000	,745	84	,000

a. Lilliefors Significance Correction

Store Format

Tests of Normality

	Store Format	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
The temperature near the fridge areas is adequate	Hiper	,318	148	,000	,808	148	,000
	Super	,360	151	,000	,755	151	,000
The temperature near the surroundings areas is adequate	Hiper	,451	148	,000	,531	148	,000
	Super	,415	151	,000	,679	151	,000
The temperature levels in the corridors being uniform is important for the comfort of the purchase	Hiper	,387	148	,000	,740	148	,000
	Super	,339	151	,000	,780	151	,000
The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort	Hiper	,320	148	,000	,708	148	,000
	Super	,407	151	,000	,691	151	,000

a. Lilliefors Significance Correction

Age Groups

Tests of Normality

	Age Groups	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
The temperature near the fridge areas is adequate	Juniors	,332	84	,000	,795	84	,000
	Adults + Seniors	,335	215	,000	,791	215	,000
The temperature near the surroundings areas is adequate	Juniors	,477	84	,000	,529	84	,000
	Adults + Seniors	,419	215	,000	,673	215	,000
The temperature levels in the corridors being uniform is important for the comfort of the purchase	Juniors	,363	84	,000	,763	84	,000
	Adults + Seniors	,350	215	,000	,791	215	,000
The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort	Juniors	,315	84	,000	,790	84	,000
	Adults + Seniors	,404	215	,000	,715	215	,000

a. Lilliefors Significance Correction

Tests of Normality

	Age Groups	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
The temperature near the fridge areas is adequate	Adults	,348	176	,000	,770	176	,000
	Juniors + Seniors	,313	123	,000	,821	123	,000
The temperature near the surroundings areas is adequate	Adults	,440	176	,000	,628	176	,000
	Juniors + Seniors	,429	123	,000	,656	123	,000
The temperature levels in the corridors being uniform is important for the comfort of the purchase	Adults	,347	176	,000	,794	176	,000
	Juniors + Seniors	,365	123	,000	,767	123	,000
The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort	Adults	,411	176	,000	,703	176	,000
	Juniors + Seniors	,328	123	,000	,795	123	,000

a. Lilliefors Significance Correction

Tests of Normality

	Age Groups	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
The temperature near the fridge areas is adequate	Seniors	,276	39	,000	,846	39	,000
	Juniors + Adults	,343	260	,000	,780	260	,000
The temperature near the surroundings areas is adequate	Seniors	,328	39	,000	,809	39	,000
	Juniors + Adults	,452	260	,000	,598	260	,000
The temperature levels in the corridors being uniform is important for the comfort of the purchase	Seniors	,353	39	,000	,785	39	,000
	Juniors + Adults	,352	260	,000	,784	260	,000
The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort	Seniors	,368	39	,000	,768	39	,000
	Juniors + Adults	,378	260	,000	,749	260	,000

a. Lilliefors Significance Correction

T-Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
The temperature near the fridge areas is adequate	Equal variances assumed	2,052	,153	2,561	297	,011	,306	,120	,071	,542
	Equal variances not assumed			2,422	136,016	,017	,306	,126	,056	,556
The temperature near the surroundings areas is adequate	Equal variances assumed	5,478	,020	1,426	299	,155	,094	,066	-,036	,224
	Equal variances not assumed			1,379	143,903	,170	,094	,068	-,041	,229
The temperature levels in the corridors being uniform is important for the comfort of the purchase	Equal variances assumed	2,529	,113	-,104	299	,918	-,013	,122	-,253	,227
	Equal variances not assumed			-,109	173,097	,913	-,013	,115	-,241	,215
The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort	Equal variances assumed	6,725	,010	-1,074	299	,284	-,115	,107	-,326	,096
	Equal variances not assumed			-1,197	196,885	,233	-,115	,096	-,304	,074

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
The temperature near the fridge areas is adequate	Equal variances assumed	80,754	,000	-4,583	297	,000	-,481	,105	-,688	-,275
	Equal variances not assumed			-4,562	240,952	,000	-,481	,106	-,689	-,273
The temperature near the surroundings areas is adequate	Equal variances assumed	26,263	,000	3,753	299	,000	,218	,058	,104	,333
	Equal variances not assumed			3,754	297,168	,000	,218	,058	,104	,333
The temperature levels in the corridors being uniform is important for the comfort of the purchase	Equal variances assumed	8,541	,004	,514	299	,608	,056	,110	-,160	,272
	Equal variances not assumed			,513	268,976	,608	,056	,110	-,160	,273
The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort	Equal variances assumed	22,744	,000	7,937	299	,000	,697	,088	,524	,870
	Equal variances not assumed			7,944	280,703	,000	,697	,088	,524	,869

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
The temperature near the fridge areas is adequate	Equal variances assumed	6,455	,012	-1,443	297	,150	-,174	,120	-,411	,063
	Equal variances not assumed			-1,355	134,318	,178	-,174	,128	-,427	,080
The temperature near the surroundings areas is adequate	Equal variances assumed	2,802	,095	,316	299	,752	,021	,066	-,109	,151
	Equal variances not assumed			,335	174,711	,738	,021	,062	-,102	,144
The temperature levels in the corridors being uniform is important for the comfort of the purchase	Equal variances assumed	5,471	,020	-1,652	299	,100	-,200	,121	-,439	,038
	Equal variances not assumed			-1,546	135,340	,124	-,200	,130	-,457	,056
The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort	Equal variances assumed	1,442	,231	1,382	299	,168	,148	,107	-,063	,358
	Equal variances not assumed			1,295	135,700	,198	,148	,114	-,078	,373

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
The temperature near the fridge areas is adequate	Equal variances assumed	1,042	,308	,901	297	,368	,099	,110	-,118	,316
	Equal variances not assumed			,894	254,611	,372	,099	,111	-,120	,318
The temperature near the surroundings areas is adequate	Equal variances assumed	,701	,403	,372	299	,710	,022	,060	-,096	,141
	Equal variances not assumed			,367	253,071	,714	,022	,061	-,098	,143
The temperature levels in the corridors being uniform is important for the comfort of the purchase	Equal variances assumed	,017	,897	-,105	299	,916	-,012	,112	-,231	,208
	Equal variances not assumed			-,105	260,477	,917	-,012	,112	-,232	,209
The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort	Equal variances assumed	,140	,709	-1,270	299	,205	-,124	,098	-,317	,068
	Equal variances not assumed			-1,260	257,034	,209	-,124	,099	-,319	,070

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
The temperature near the fridge areas is adequate	Equal variances assumed	3,106	,079	,604	297	,546	,097	,161	-,220	,415
	Equal variances not assumed			,699	56,359	,488	,097	,139	-,182	,377
The temperature near the surroundings areas is adequate	Equal variances assumed	10,229	,002	-,969	299	,333	-,086	,088	-,260	,088
	Equal variances not assumed			-,772	44,284	,444	-,086	,111	-,310	,138
The temperature levels in the corridors being uniform is important for the comfort of the purchase	Equal variances assumed	14,317	,000	2,380	299	,018	,385	,162	,067	,704
	Equal variances not assumed			3,225	67,543	,002	,385	,120	,147	,624
The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort	Equal variances assumed	1,066	,303	,011	299	,991	,002	,144	-,281	,285
	Equal variances not assumed			,013	56,710	,990	,002	,123	-,245	,248

NPar Tests

Mann-Whitney Test

Test Statistics[a]

	The temperature near the fridge areas is adequate	The temperature near the surroundings areas is adequate	The temperature levels in the corridors being uniform is important for the comfort of the purchase	The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort
Mann-Whitney U	7536,500	8296,000	8970,000	8910,000
Wilcoxon W	11106,500	11951,000	12625,000	32346,000
Z	-2,458	-1,774	-,349	-,465
Asymp. Sig. (2-tailed)	,014	,076	,727	,642

a. Grouping Variable: Gender

Test Statistics[a]

	The temperature near the fridge areas is adequate	The temperature near the surroundings areas is adequate	The temperature levels in the corridors being uniform is important for the comfort of the purchase	The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort
Mann-Whitney U	8843,000	8956,500	10048,500	6442,000
Wilcoxon W	19869,000	20432,500	21524,500	17918,000
Z	-3,448	-4,278	-1,908	-7,572
Asymp. Sig. (2-tailed)	,001	,000	,056	,000

a. Grouping Variable: Store Format

Test Statistics[a]

	The temperature near the fridge areas is adequate	The temperature near the surroundings areas is adequate	The temperature levels in the corridors being uniform is important for the comfort of the purchase	The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort
Mann-Whitney U	8371,000	8932,500	8438,500	8050,000
Wilcoxon W	11941,000	32368,500	12093,500	31486,000
Z	-1,084	-,497	-1,231	-1,946
Asymp. Sig. (2-tailed)	,278	,620	,218	,052

a. Grouping Variable: Age Groups

Test Statistics[a]

	The temperature near the fridge areas is adequate	The temperature near the surroundings areas is adequate	The temperature levels in the corridors being uniform is important for the comfort of the purchase	The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort
Mann-Whitney U	10190,500	10799,500	10800,500	10068,500
Wilcoxon W	17816,500	18549,500	26553,500	25821,500
Z	-,952	-,320	-,263	-1,426
Asymp. Sig. (2-tailed)	,341	,749	,792	,154

a. Grouping Variable: Age Groups

Test Statistics[a]

	The temperature near the fridge areas is adequate	The temperature near the surroundings areas is adequate	The temperature levels in the corridors being uniform is important for the comfort of the purchase	The fact that the temperature inside the store is adequate to the exterior temperature, increases my well being and comfort
Mann-Whitney U	5044,500	4687,000	4194,000	4884,500
Wilcoxon W	38974,500	5467,000	38647,000	5664,500
Z	-,056	-1,135	-2,036	-,518
Asymp. Sig. (2-tailed)	,955	,256	,042	,604

a. Grouping Variable: Age Groups

7.i ANNEX 9 - SPSS OUTPUTS FOR H7

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,782
Bartlett's Test of Sphericity	Approx. Chi-Square	395,282
	df	15
	Sig.	,000

Communalities

	Initial	Extraction
The corridors in the store are spacious and allow a good circulation	1,000	,484
The product organization allows an easy location of what I am looking for	1,000	,698
I can easily identify the items that are in promotion in the store	1,000	,675
The quantity of promotional / informative posters inside the store is adequate	1,000	,724
I can easily identify the price of the products	1,000	,897
The clear identification of the product categories and the shelves information increases my well being and comfort	1,000	,923

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,630	43,841	43,841	2,630	43,841	43,841	2,161	36,018	36,018
2	1,007	16,780	60,621	1,007	16,780	60,621	1,173	19,555	55,573
3	,763	12,722	73,343	,763	12,722	73,343	1,066	17,770	73,343
4	,683	11,380	84,724						
5	,594	9,903	94,627						
6	,322	5,373	100,000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component		
	1	2	3
The quantity of promotional / informative posters inside the store is adequate	,844		
I can easily identify the items that are in promotion in the store	,821		
The corridors in the store are spacious and allow a good circulation	,686		-,112
The product organization allows an easy location of what I am looking for	,598	-,350	-,466
The clear identification of the product categories and the shelves information increases my well being and comfort	,246	,927	
I can easily identify the price of the products	,596	-,140	,723

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Rotated Component Matrix[a]

	Component		
	1	2	3
The product organization allows an easy location of what I am looking for	,798	-,101	-,225
The quantity of promotional / informative posters inside the store is adequate	,757	,315	,228
I can easily identify the items that are in promotion in the store	,706	,396	,139
The corridors in the store are spacious and allow a good circulation	,639	,219	,165
I can easily identify the price of the products	,195	,927	
The clear identification of the product categories and the shelves information increases my well being and comfort			,957

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Component Transformation Matrix

Component	1	2	3
1	,863	,468	,191
2	-,172	-,084	,982
3	-,475	,880	-,008

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Gender

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Gender	Statistic	df	Sig.	Statistic	df	Sig.
FacF_V2_Layout 1	1	,183	216	,000	,920	216	,000
	2	,194	85	,000	,870	85	,000
FacF_V2_Layout 2	1	,225	216	,000	,869	216	,000
	2	,229	85	,000	,874	85	,000
FacF_V2_Layout 3	1	,202	216	,000	,860	216	,000
	2	,237	85	,000	,829	85	,000

a. Lilliefors Significance Correction

Store Format

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Store Format	Statistic	df	Sig.	Statistic	df	Sig.
FacF_V2_Layout 1	Hiper	,242	150	,000	,847	150	,000
	Super	,138	151	,000	,951	151	,000
FacF_V2_Layout 2	Hiper	,218	150	,000	,894	150	,000
	Super	,239	151	,000	,841	151	,000
FacF_V2_Layout 3	Hiper	,239	150	,000	,844	150	,000
	Super	,197	151	,000	,854	151	,000

a. Lilliefors Significance Correction

Age Groups

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_V2_Layout 1	Juniors	,156	85	,000	,942	85	,001
	Adults + Seniors	,197	216	,000	,892	216	,000
FacF_V2_Layout 2	Juniors	,184	85	,000	,919	85	,000
	Adults + Seniors	,247	216	,000	,857	216	,000
FacF_V2_Layout 3	Juniors	,159	85	,000	,904	85	,000
	Adults + Seniors	,231	216	,000	,823	216	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_V2_Layout 1	Adults	,198	177	,000	,868	177	,000
	Juniors + Seniors	,158	124	,000	,947	124	,000
FacF_V2_Layout 2	Adults	,238	177	,000	,857	177	,000
	Juniors + Seniors	,209	124	,000	,899	124	,000
FacF_V2_Layout 3	Adults	,231	177	,000	,817	177	,000
	Juniors + Seniors	,179	124	,000	,887	124	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_V2_Layout 1	Seniors	,199	39	,000	,933	39	,023
	Juniors + Adults	,179	262	,000	,897	262	,000
FacF_V2_Layout 2	Seniors	,276	39	,000	,856	39	,000
	Juniors + Adults	,220	262	,000	,881	262	,000
FacF_V2_Layout 3	Seniors	,243	39	,000	,822	39	,000
	Juniors + Adults	,207	262	,000	,856	262	,000

a. Lilliefors Significance Correction

T-Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_Layout 1	Equal variances assumed	4,087	,044	-,141	299	,888	-,01814647	,12825001	-,27053346	,23424053
	Equal variances not assumed			-,156	190,766	,876	-,01814647	,11652151	-,24798251	,21168958
FacF_V2_Layout 2	Equal variances assumed	1,618	,204	-,930	299	,353	-,11916444	,12806902	-,37119527	,13286638
	Equal variances not assumed			-,957	163,250	,340	-,11916444	,12452182	-,36504549	,12671660
FacF_V2_Layout 3	Equal variances assumed	,834	,362	-,778	299	,437	-,09971772	,12812459	-,35185789	,15242246
	Equal variances not assumed			-,752	143,458	,454	-,09971772	,13268168	-,36198141	,16254597

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_Layout 1	Equal variances assumed	,919	,339	,940	299	,348	,10834613	,11530121	-,11855854	,33525079
	Equal variances not assumed			,940	298,214	,348	,10834613	,11527892	-,11851711	,33520936
FacF_V2_Layout 2	Equal variances assumed	9,037	,003	2,476	299	,014	,28302946	,11430537	,05808454	,50797439
	Equal variances not assumed			2,478	289,379	,014	,28302946	,11423342	,05819575	,50786318
FacF_V2_Layout 3	Equal variances assumed	,641	,424	,723	299	,470	,08339861	,11537056	-,14364255	,31043976
	Equal variances not assumed			,723	298,484	,470	,08339861	,11538399	-,14367056	,31046777

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_Layout 1	Equal variances assumed	,337	,562	-,981	299	,327	-,12565539	,12804827	-,37764537	,12633460
	Equal variances not assumed			-,983	154,405	,327	-,12565539	,12781058	-,37813842	,12682765
FacF_V2_Layout 2	Equal variances assumed	2,298	,131	1,580	299	,115	,20177832	,12772234	-,04957027	,45312691
	Equal variances not assumed			1,648	168,391	,101	,20177832	,12244846	-,03995353	,44351018
FacF_V2_Layout 3	Equal variances assumed	8,344	,004	2,183	299	,030	,27779863	,12724412	,02739116	,52820611
	Equal variances not assumed			2,016	132,184	,046	,27779863	,13777710	,00526541	,55033186

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_Layout 1	Equal variances assumed	,265	,607	-1,188	299	,236	-,13902123	,11702761	-,36932334	,09128089
	Equal variances not assumed			-1,178	256,991	,240	-,13902123	,11799030	-,37137219	,09332974
FacF_V2_Layout 2	Equal variances assumed	2,915	,089	,962	299	,337	,11264785	,11712242	-,11784083	,34313653
	Equal variances not assumed			,942	244,917	,347	,11264785	,11952495	-,12278012	,34807581
FacF_V2_Layout 3	Equal variances assumed	8,523	,004	-1,986	299	,048	-,23149360	,11653700	-,46083022	-,00215698
	Equal variances not assumed			-1,931	236,935	,055	-,23149360	,11986956	-,46763986	,00465265

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_V2_Layout 1	Equal variances assumed	,749	,388	3,099	299	,002	,52439526	,16922364	,19137504	,85741548
	Equal variances not assumed			3,058	49,551	,004	,52439526	,17148401	,17988220	,86890831
FacF_V2_Layout 2	Equal variances assumed	13,236	,000	-3,591	299	,000	-,60452583	,16832734	-,93578221	-,27326946
	Equal variances not assumed			-2,990	45,141	,004	-,60452583	,20215071	-1,01164322	-,19740844
FacF_V2_Layout 3	Equal variances assumed	,002	,967	-,011	299	,991	-,00191440	,17191954	-,34023996	,33641117
	Equal variances not assumed			-,011	50,136	,991	-,00191440	,17120486	-,34576633	,34193754

NPar Tests

Mann-Whitney Test

Test Statistics[a]

	FacF_V2_Layout 1	FacF_V2_Layout 2	FacF_V2_Layout 3
Mann-Whitney U	9170,000	8762,000	8842,000
Wilcoxon W	12825,000	32198,000	32278,000
Z	-,015	-,627	-,507
Asymp. Sig. (2-tailed)	,988	,530	,612

a. Grouping Variable: Gender

Test Statistics[a]

	FacF_V2_Layout 1	FacF_V2_Layout 2	FacF_V2_Layout 3
Mann-Whitney U	10130,000	10646,000	10820,000
Wilcoxon W	21606,000	22122,000	22296,000
Z	-1,615	-,917	-,682
Asymp. Sig. (2-tailed)	,106	,359	,495

a. Grouping Variable: Store Format

Test Statistics[a]

	FacF_V2_Layout 1	FacF_V2_Layout 2	FacF_V2_Layout 3
Mann-Whitney U	8154,000	8360,000	7458,000
Wilcoxon W	11809,000	31796,000	30894,000
Z	-1,540	-1,231	-2,584
Asymp. Sig. (2-tailed)	,124	,218	,010

a. Grouping Variable: Age Groups

Test Statistics[a]

	FacF_V2_Layout 1	FacF_V2_Layout 2	FacF_V2_Layout 3
Mann-Whitney U	10380,000	10442,000	9170,000
Wilcoxon W	26133,000	18192,000	24923,000
Z	-,815	-,730	-2,476
Asymp. Sig. (2-tailed)	,415	,465	,013

a. Grouping Variable: Age Groups

Test Statistics[a]

	FacF_V2_Layout 1	FacF_V2_Layout 2	FacF_V2_Layout 3
Mann-Whitney U	3489,000	3757,000	5027,000
Wilcoxon W	37942,000	4537,000	39480,000
Z	-3,259	-2,720	-,165
Asymp. Sig. (2-tailed)	,001	,007	,869

a. Grouping Variable: Age Groups

Means

FacF_V2_Layout 3 * Gender

FacF_V2_Layout 3

Gender	Mean	N	Std. Deviation
1	-,0281595	216	,97707484
2	,0715582	85	1,05862835
Total	,0000000	301	1,00000000

FacF_V2_Layout 3 * Store Format

FacF_V2_Layout 3

Store Format	Mean	N	Std. Deviation
Hiper	,0418378	150	1,01817135
Super	-,0415608	151	,98323396
Total	,0000000	301	1,00000000

FacF_V2_Layout 3 * Age Groups

FacF_V2_Layout 3

Age Groups	Mean	N	Std. Deviation
Adults	-,0953661	177	,92547885
Juniors + Seniors	,1361275	124	1,08705045
Total	,0000000	301	1,00000000

FacF_V2_Layout 3 * Age Groups

FacF_V2_Layout 3

Age Groups	Mean	N	Std. Deviation
Juniors	,1993505	85	1,12604777
Adults + Seniors	-,0784481	216	,93704667
Total	,0000000	301	1,00000000

FacF_V2_Layout 3 * Age Groups

FacF_V2_Layout 3

Age Groups	Mean	N	Std. Deviation
Seniors	-,0016664	39	,99677902
Juniors + Adults	,0002480	262	1,00238084
Total	,0000000	301	1,00000000

FacF_V2_Layout 1 * Age Groups

FacF_V2_Layout 1

Age Groups	Mean	N	Std. Deviation
Juniors	-,0901713	85	,99700308
Adults + Seniors	,0354841	216	1,00125418
Total	,0000000	301	1,00000000

FacF_V2_Layout 1 * Gender

FacF_V2_Layout 1

Gender	Mean	N	Std. Deviation
1	-,0051244	216	1,05637848
2	,0130220	85	,84553297
Total	,0000000	301	1,00000000

FacF_V2_Layout 1 * Store Format

FacF_V2_Layout 1

Store Format	Mean	N	Std. Deviation
Hiper	,0543530	150	,97066433
Super	-,0539931	151	1,02868998
Total	,0000000	301	1,00000000

FacF_V2_Layout 1 * Age Groups

FacF_V2_Layout 1

Age Groups	Mean	N	Std. Deviation
Adults	-,0572712	177	,97990669
Juniors + Seniors	,0817500	124	1,02644912
Total	,0000000	301	1,00000000

FacF_V2_Layout 1 * Age Groups

FacF_V2_Layout 1

Age Groups	Mean	N	Std. Deviation
Seniors	,4564504	39	1,00141090
Juniors + Adults	-,0679449	262	,98369395
Total	,0000000	301	1,00000000

FacF_V2_Layout 2 * Age Groups

FacF_V2_Layout 2

Age Groups	Mean	N	Std. Deviation
Juniors	,1447977	85	,92871806
Adults + Seniors	-,0569806	216	1,02313950
Total	,0000000	301	1,00000000

FacF_V2_Layout 2 * Gender

FacF_V2_Layout 2

Gender	Mean	N	Std. Deviation
1	-,0336511	216	1,01764861
2	,0855134	85	,95417608
Total	,0000000	301	1,00000000

FacF_V2_Layout 2 * Store Format

FacF_V2_Layout 2

Store Format	Mean	N	Std. Deviation
Hiper	,1419849	150	,89273311
Super	-,1410446	151	1,08081212
Total	,0000000	301	1,00000000

FacF_V2_Layout 2 * Age Groups

FacF_V2_Layout 2

Age Groups	Mean	N	Std. Deviation
Adults	,0464064	177	,95064048
Juniors + Seniors	-,0662414	124	1,06694789
Total	,0000000	301	1,00000000

FacF_V2_Layout 2 * Age Groups

FacF_V2_Layout 2

Age Groups	Mean	N	Std. Deviation
Seniors	-,5261986	39	1,20887583
Juniors + Adults	,0783273	262	,94293421
Total	,0000000	301	1,00000000

7.j ANNEX 10 - SPSS OUTPUTS FOR H8

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,663
Bartlett's Test of Sphericity	Approx. Chi-Square	292,191
	df	10
	Sig.	,000

Communalities

	Initial	Extraction
The waiting time to be attended at the service counter is reasonable	1,000	,954
The waiting time at the cashiers is reasonable	1,000	,666
When I need help, I can easily find an employee shop assistant	1,000	,797
There is a prompt response from the store (for example, by opening more cashiers) at the moments of more customer flow	1,000	,696
The fact of the waiting times in the store are reasonable increases my well being and comfort	1,000	,980

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,201	44,024	44,024	2,201	44,024	44,024	1,946	38,926	38,926
2	1,187	23,736	67,760	1,187	23,736	67,760	1,114	22,290	61,216
3	,704	14,090	81,850	,704	14,090	81,850	1,032	20,635	81,850
4	,520	10,405	92,255						
5	,387	7,745	100,000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component		
	1	2	3
The waiting time at the cashiers is reasonable	,808		
When I need help, I can easily find an employee shop assistant	,804	-,233	-,311
There is a prompt response from the store (for example, by opening more cashiers) at the moments of more customer flow	,772	,286	-,135
The waiting time to be attended at the service counter is reasonable	,403	,734	,503
The fact of the waiting times in the store are reasonable increases my well being and comfort	,378	-,712	,574

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Rotated Component Matrix[a]

	Component		
	1	2	3
When I need help, I can easily find an employee shop assistant	,873	-,103	,158
The waiting time at the cashiers is reasonable	,773	,154	,209
There is a prompt response from the store (for example, by opening more cashiers) at the moments of more customer flow	,742	,374	
The waiting time to be attended at the service counter is reasonable	,118	,968	
The fact of the waiting times in the store are reasonable increases my well being and comfort	,151		,977

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Component Transformation Matrix

Component	1	2	3
1	,910	,318	,265
2	-,058	,732	-,679
3	-,410	,602	,685

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Gender

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Gender	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Waiting1	1	,155	214	,000	,935	214	,000
	2	,177	84	,000	,881	84	,000
FacF_Waiting2	1	,217	214	,000	,899	214	,000
	2	,189	84	,000	,903	84	,000
FacF_Waiting3	1	,187	214	,000	,868	214	,000
	2	,279	84	,000	,779	84	,000

a. Lilliefors Significance Correction

Store Format

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Store Format	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Waiting1	Hiper	,097	147	,002	,966	147	,001
	Super	,206	151	,000	,849	151	,000
FacF_Waiting2	Hiper	,141	147	,000	,947	147	,000
	Super	,261	151	,000	,829	151	,000
FacF_Waiting3	Hiper	,153	147	,000	,913	147	,000
	Super	,246	151	,000	,764	151	,000

a. Lilliefors Significance Correction

Age Groups

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Waiting1	Juniors	,165	84	,000	,915	84	,000
	Adults + Seniors	,152	214	,000	,921	214	,000
FacF_Waiting2	Juniors	,185	84	,000	,927	84	,000
	Adults + Seniors	,218	214	,000	,886	214	,000
FacF_Waiting3	Juniors	,247	84	,000	,839	84	,000
	Adults + Seniors	,172	214	,000	,865	214	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Waiting1	Adults	,159	176	,000	,912	176	,000
	Juniors + Seniors	,155	122	,000	,937	122	,000
FacF_Waiting2	Adults	,213	176	,000	,890	176	,000
	Juniors + Seniors	,203	122	,000	,912	122	,000
FacF_Waiting3	Adults	,185	176	,000	,857	176	,000
	Juniors + Seniors	,202	122	,000	,862	122	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Waiting1	Seniors	,200	38	,001	,930	38	,020
	Juniors + Adults	,162	260	,000	,917	260	,000
FacF_Waiting2	Seniors	,240	38	,000	,859	38	,000
	Juniors + Adults	,205	260	,000	,905	260	,000
FacF_Waiting3	Seniors	,202	38	,000	,888	38	,001
	Juniors + Adults	,204	260	,000	,853	260	,000

a. Lilliefors Significance Correction

T-Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Waiting1	Equal variances assumed	,492	,484	-1,121	296	,263	-,14428029	,12869863	-,39756057	,10900000
	Equal variances not assumed			-1,132	154,798	,260	-,14428029	,12750513	-,39615486	,10759428
FacF_Waiting2	Equal variances assumed	2,249	,135	1,891	296	,060	,24247105	,12819923	-,00982640	,49476851
	Equal variances not assumed			1,811	139,310	,072	,24247105	,13392219	-,02231176	,50725387
FacF_Waiting3	Equal variances assumed	,690	,407	-,813	296	,417	-,10472060	,12882785	-,35825520	,14881400
	Equal variances not assumed			-,904	192,940	,367	-,10472060	,11584997	-,33321562	,12377442

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Waiting1	Equal variances assumed	17,466	,000	-4,125	296	,000	-,46561176	,11286355	-,68772843	-,24349509
	Equal variances not assumed			-4,110	270,214	,000	-,46561176	,11329466	-,68866425	-,24255927
FacF_Waiting2	Equal variances assumed	78,571	,000	-8,856	296	,000	-,91385527	,10319498	-1,11694409	-,71076645
	Equal variances not assumed			-8,797	232,944	,000	-,91385527	,10388762	-1,11853467	-,70917587
FacF_Waiting3	Equal variances assumed	5,718	,017	1,729	296	,085	,19969711	,11548102	-,02757079	,42696500
	Equal variances not assumed			1,728	293,403	,085	,19969711	,11558561	-,02778489	,42717910

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Waiting1	Equal variances assumed	,562	,454	1,735	296	,084	,22269160	,12832040	-,02984433	,47522753
	Equal variances not assumed			1,784	160,981	,076	,22269160	,12481621	-,02379668	,46917988
FacF_Waiting2	Equal variances assumed	2,013	,157	-1,998	296	,047	-,25592782	,12811083	-,50805131	-,00380434
	Equal variances not assumed			-1,944	143,723	,054	-,25592782	,13166915	-,51618604	,00433040
FacF_Waiting3	Equal variances assumed	,160	,689	,650	296	,516	,08374693	,12887967	-,16988965	,33738351
	Equal variances not assumed			,688	172,147	,492	,08374693	,12163817	-,15634739	,32384125

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Waiting1	Equal variances assumed	,320	,572	-1,636	296	,103	-,19217098	,11747623	-,42336546	,03902349
	Equal variances not assumed			-1,647	266,733	,101	-,19217098	,11664686	-,42183671	,03749475
FacF_Waiting2	Equal variances assumed	2,045	,154	1,817	296	,070	,21318848	,11735366	-,01776478	,44414174
	Equal variances not assumed			1,794	248,597	,074	,21318848	,11883055	-,02085452	,44723149
FacF_Waiting3	Equal variances assumed	,001	,979	-,239	296	,811	-,02816679	,11799469	-,26038160	,20404802
	Equal variances not assumed			-,240	266,391	,810	-,02816679	,11720754	-,25893779	,20260420

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Waiting1	Equal variances assumed	,002	,968	,072	296	,943	,01246874	,17396355	-,32989339	,35483087
	Equal variances not assumed			,070	47,765	,944	,01246874	,17786368	-,34519563	,37013311
FacF_Waiting2	Equal variances assumed	,038	,845	,013	296	,989	,00232545	,17396501	-,34003955	,34469045
	Equal variances not assumed			,013	47,706	,990	,00232545	,17821540	-,35605778	,36070868
FacF_Waiting3	Equal variances assumed	,404	,525	-,524	296	,601	-,09115762	,17388435	-,43336390	,25104865
	Equal variances not assumed			-,471	45,496	,640	-,09115762	,19342385	-,48061615	,29830090

NPar Tests

Mann-Whitney Test

Test Statistics[a]

	FacF_Waiting1	FacF_Waiting2	FacF_Waiting3
Mann-Whitney U	7970,500	7962,500	8693,500
Wilcoxon W	30975,500	11532,500	12263,500
Z	-1,530	-1,542	-,443
Asymp. Sig. (2-tailed)	,126	,123	,658

a. Grouping Variable: Gender

Test Statistics[a]

	FacF_Waiting1	FacF_Waiting2	FacF_Waiting3
Mann-Whitney U	8444,500	5842,500	10094,500
Wilcoxon W	19322,500	16720,500	21570,500
Z	-3,592	-7,114	-1,359
Asymp. Sig. (2-tailed)	,000	,000	,174

a. Grouping Variable: Store Format

Test Statistics[a]

	FacF_Waiting1	FacF_Waiting2	FacF_Waiting3
Mann-Whitney U	7620,000	7738,000	8966,000
Wilcoxon W	30625,000	11308,000	31971,000
Z	-2,058	-1,880	-,033
Asymp. Sig. (2-tailed)	,040	,060	,974

a. Grouping Variable: Age Groups

Test Statistics[a]

	FacF_Waiting1	FacF_Waiting2	FacF_Waiting3
Mann-Whitney U	9632,000	9532,000	10714,000
Wilcoxon W	25208,000	17035,000	18217,000
Z	-1,519	-1,657	-,030
Asymp. Sig. (2-tailed)	,129	,098	,976

a. Grouping Variable: Age Groups

Test Statistics[a]

	FacF_Waiting1	FacF_Waiting2	FacF_Waiting3
Mann-Whitney U	4676,000	4894,000	4896,000
Wilcoxon W	5417,000	38824,000	5637,000
Z	-,536	-,093	-,089
Asymp. Sig. (2-tailed)	,592	,926	,929

a. Grouping Variable: Age Groups

Means

FacF_Waiting2 * Age Groups

FacF_Waiting2

Age Groups	Mean	N	Std. Deviation
Juniors	-,1837871	84	1,04004788
Adults + Seniors	,0721407	214	,97688758
Total	,0000000	298	1,00000000

FacF_Waiting2 * Gender

FacF_Waiting2

Gender	Mean	N	Std. Deviation
1	,0683475	214	,96614086
2	-,1741235	84	1,06778303
Total	,0000000	298	1,00000000

FacF_Waiting2 * Store Format

FacF_Waiting2

Store Format	Mean	N	Std. Deviation
Hiper	-,4630609	147	1,09326103
Super	,4507944	151	,63399181
Total	,0000000	298	1,00000000

FacF_Waiting2 * Age Groups

FacF_Waiting2

Age Groups	Mean	N	Std. Deviation
Adults	,0872785	176	,96737127
Juniors + Seniors	-,1259100	122	1,03635946
Total	,0000000	298	1,00000000

FacF_Waiting2 * Age Groups

FacF_Waiting2

Age Groups	Mean	N	Std. Deviation
Seniors	,0020289	38	1,03027821
Juniors + Adults	-,0002965	260	,99753618
Total	,0000000	298	1,00000000

FacF_Waiting3 * Age Groups

FacF_Waiting3

Age Groups	Mean	N	Std. Deviation
Juniors	,0601404	84	,90666719
Adults + Seniors	-,0236065	214	1,03539963
Total	,0000000	298	1,00000000

FacF_Waiting3 * Gender

FacF_Waiting3

Gender	Mean	N	Std. Deviation
1	-,0295186	214	1,06011823
2	,0752020	84	,82839876
Total	,0000000	298	1,00000000

FacF_Waiting3 * Store Format

FacF_Waiting3

Store Format		Mean	N	Std. Deviation
	Hiper	,1011888	147	1,03008502
	Super	-,0985083	151	,96302504
	Total	,0000000	298	1,00000000

FacF_Waiting3 * Age Groups

FacF_Waiting3

Age Groups	Mean	N	Std. Deviation
Adults	-,0115314	176	1,01645325
Juniors + Seniors	,0166354	122	,97969815
Total	,0000000	298	1,00000000

FacF_Waiting3 * Age Groups

FacF_Waiting3

Age Groups	Mean	N	Std. Deviation
Seniors	-,0795335	38	1,13180829
Juniors + Adults	,0116241	260	,98115027
Total	,0000000	298	1,00000000

FacF_Waiting1 * Age Groups

FacF_Waiting1

Age Groups	Mean	N	Std. Deviation
Juniors	,1599195	84	,95147559
Adults + Seniors	-,0627721	214	1,01368141
Total	,0000000	298	1,00000000

FacF_Waiting1 * Gender

FacF_Waiting1

Gender		Mean	N	Std. Deviation
	1	-,0406696	214	1,00546128
	2	,1036107	84	,98428267
	Total	,0000000	298	1,00000000

FacF_Waiting1 * Store Format

FacF_Waiting1

Store Format		Mean	N	Std. Deviation
	Hiper	-,2359308	147	1,10547842
	Super	,2296810	151	,82634812
	Total	,0000000	298	1,00000000

FacF_Waiting1 * Age Groups

FacF_Waiting1

Age Groups	Mean	N	Std. Deviation
Adults	-,0786740	176	1,01283971
Juniors + Seniors	,1134970	122	,97411258
Total	,0000000	298	1,00000000

FacF_Waiting1 * Age Groups

FacF_Waiting1

Age Groups	Mean	N	Std. Deviation
Seniors	,0108788	38	1,02791797
Juniors + Adults	-,0015900	260	,99787434
Total	,0000000	298	1,00000000

7.k ANNEX 11 - SPSS OUTPUTS FOR H9

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,779
Bartlett's Test of Sphericity	Approx. Chi-Square	818,743
	df	6
	Sig.	,000

Communalities

	Initial	Extraction
The number of customers waiting at the service counters in the moment of higher flow is....	1,000	,909
The number of customers waiting at the cashiers at the moments of higher flow is ...	1,000	,895
The number of customers at the store at the moments of higher flow is…	1,000	,889
The fact of having a reasonable number of customers in the store increases my well being and comfort	1,000	1,000

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,767	69,167	69,167	2,767	69,167	69,167	2,670	66,742	66,742
2	,925	23,135	92,302	,925	23,135	92,302	1,022	25,560	92,302
3	,172	4,291	96,592						
4	,136	3,408	100,000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component	
	1	2
The number of customers waiting at the service counters in the moment of higher flow is....	,949	
The number of customers waiting at the cashiers at the moments of higher flow is ...	,939	-,115
The number of customers at the store at the moments of higher flow is…	,933	-,134
The fact of having a reasonable number of customers in the store increases my well being and comfort	,337	,941

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix[a]

	Component	
	1	2
The number of customers waiting at the service counters in the moment of higher flow is....	,944	,131
The number of customers waiting at the cashiers at the moments of higher flow is ...	,940	,104
The number of customers at the store at the moments of higher flow is…	,939	
The fact of having a reasonable number of customers in the store increases my well being and comfort	,112	,994

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	,973	,230
2	-,230	,973

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Gender

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Gender	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Crowding1	1	,184	212	,000	,929	212	,000
	2	,164	82	,000	,895	82	,000
FacF_Crowding2	1	,230	212	,000	,892	212	,000
	2	,277	82	,000	,863	82	,000

a. Lilliefors Significance Correction

Store Format

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Store Format	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Crowding1	Hiper	,174	147	,000	,909	147	,000
	Super	,286	147	,000	,861	147	,000
FacF_Crowding2	Hiper	,279	147	,000	,838	147	,000
	Super	,215	147	,000	,889	147	,000

a. Lilliefors Significance Correction

Age Groups

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Crowding1	Juniors	,139	83	,000	,905	83	,000
	Adults + Seniors	,199	211	,000	,924	211	,000
FacF_Crowding2	Juniors	,206	83	,000	,902	83	,000
	Adults + Seniors	,259	211	,000	,866	211	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Crowding1	Adults	,182	173	,000	,922	173	,000
	Juniors + Seniors	,182	121	,000	,919	121	,000
FacF_Crowding2	Adults	,262	173	,000	,854	173	,000
	Juniors + Seniors	,217	121	,000	,911	121	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
FacF_Crowding1	Seniors	,209	38	,000	,928	38	,018
	Juniors + Adults	,163	256	,000	,922	256	,000
FacF_Crowding2	Seniors	,248	38	,000	,885	38	,001
	Juniors + Adults	,244	256	,000	,882	256	,000

a. Lilliefors Significance Correction

T-Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Crowding1	Equal variances assumed	1,068	,302	-2,175	292	,030	-,28104042	,12922666	-,53537417	-,02670667
	Equal variances not assumed			-2,354	175,069	,020	-,28104042	,11938771	-,51666485	-,04541598
FacF_Crowding2	Equal variances assumed	1,373	,242	-1,866	292	,063	-,24159632	,12949953	-,49646711	,01327448
	Equal variances not assumed			-1,902	153,382	,059	-,24159632	,12699291	-,49247730	,00928466

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Crowding1	Equal variances assumed	1,064	,303	10,201	292	,000	1,02343374	,10032444	,82598306	1,22088441
	Equal variances not assumed			10,201	288,230	,000	1,02343374	,10032444	,82597231	1,22089516
FacF_Crowding2	Equal variances assumed	2,045	,154	3,127	292	,002	,35937024	,11493369	,13316680	,58557369
	Equal variances not assumed			3,127	291,659	,002	,35937024	,11493369	,13316570	,58557479

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Crowding1	Equal variances assumed	1,095	,296	3,464	292	,001	,44067840	,12720048	,19033242	,69102438
	Equal variances not assumed			3,771	181,355	,000	,44067840	,11684562	,21012669	,67123011
FacF_Crowding2	Equal variances assumed	,527	,468	-,122	292	,903	-,01582182	,12978507	-,27125459	,23961095
	Equal variances not assumed			-,121	147,445	,904	-,01582182	,13093497	-,27457338	,24292975

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Crowding1	Equal variances assumed	3,371	,067	-1,173	292	,242	-,13888770	,11843499	-,37198215	,09420674
	Equal variances not assumed			-1,138	229,363	,256	-,13888770	,12205005	-,37937032	,10159491
FacF_Crowding2	Equal variances assumed	,099	,754	-,657	292	,512	-,07797349	,11862583	-,31144352	,15549654
	Equal variances not assumed			-,654	253,927	,514	-,07797349	,11919664	-,31271343	,15676645

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FacF_Crowding1	Equal variances assumed	5,743	,017	-2,880	292	,004	-,49447620	,17172125	-,83244447	-,15650793
	Equal variances not assumed			-2,129	41,908	,039	-,49447620	,23226725	-,96324081	-,02571159
FacF_Crowding2	Equal variances assumed	,041	,840	1,130	292	,260	,19626918	,17376310	-,14571770	,53825607
	Equal variances not assumed			1,110	48,075	,273	,19626918	,17686782	-,15933303	,55187139

NPar Tests

Mann-Whitney Test

Test Statistics[a]

	FacF_Crowding1	FacF_Crowding2
Mann-Whitney U	7421,500	7717,500
Wilcoxon W	29999,500	30295,500
Z	-1,958	-1,502
Asymp. Sig. (2-tailed)	,050	,133

a. Grouping Variable: Gender

Test Statistics[a]

	FacF_Crowding1	FacF_Crowding2
Mann-Whitney U	4673,500	9738,500
Wilcoxon W	15551,500	20616,500
Z	-8,473	-1,473
Asymp. Sig. (2-tailed)	,000	,141

a. Grouping Variable: Store Format

Test Statistics[a]

	FacF_Crowding1	FacF_Crowding2
Mann-Whitney U	6201,000	8029,000
Wilcoxon W	28567,000	11515,000
Z	-3,923	-1,117
Asymp. Sig. (2-tailed)	,000	,264

a. Grouping Variable: Age Groups

Test Statistics[a]

	FacF_Crowding1	FacF_Crowding2
Mann-Whitney U	9152,500	10377,500
Wilcoxon W	24203,500	25428,500
Z	-1,845	-,125
Asymp. Sig. (2-tailed)	,065	,901

a. Grouping Variable: Age Groups

Test Statisticsa

	FacF_Crowding1	FacF_Crowding2
Mann-Whitney U	3622,500	4047,500
Wilcoxon W	4363,500	36943,500
Z	-2,557	-1,682
Asymp. Sig. (2-tailed)	,011	,093

a. Grouping Variable: Age Groups

Means

FacF_Crowding1 FacF_Crowding2 * Age Groups

Age Groups		FacF_Crowding1	FacF_Crowding2
Juniors	Mean	,3162692	-,0113551
	N	83	83
	Std. Deviation	,84616704	1,01625433
Adults + Seniors	Mean	-,1244092	,0044667
	N	211	211
	Std. Deviation	1,02984084	,99593869
Total	Mean	,0000000	,0000000
	N	294	294
	Std. Deviation	1,00000000	1,00000000

FacF_Crowding1 FacF_Crowding2 * Gender

Gender		FacF_Crowding1	FacF_Crowding2
1	Mean	-,0783854	-,0673840
	N	212	212
	Std. Deviation	1,03819928	1,00765708
2	Mean	,2026550	,1742123
	N	82	82
	Std. Deviation	,86710650	,96420529
Total	Mean	,0000000	,0000000
	N	294	294
	Std. Deviation	1,00000000	1,00000000

FacF_Crowding1 FacF_Crowding2 * Store Format

Store Format			FacF_Crowding1	FacF_Crowding2
	Hiper	Mean	,5117169	,1796851
		N	147	147
		Std. Deviation	,80942348	,96836265
	Super	Mean	-,5117169	-,1796851
		N	147	147
		Std. Deviation	,90795793	1,00205156
	Total	Mean	,0000000	,0000000
		N	294	294
		Std. Deviation	1,00000000	1,00000000

FacF_Crowding1 FacF_Crowding2 * Age Groups

Age Groups		FacF_Crowding1	FacF_Crowding2
Adults	Mean	-,0571613	-,0320911
	N	173	173
	Std. Deviation	,92487223	,98972751
Juniors + Seniors	Mean	,0817264	,0458824
	N	121	121
	Std. Deviation	1,09734417	1,01686895
Total	Mean	,0000000	,0000000
	N	294	294
	Std. Deviation	1,00000000	1,00000000

FacF_Crowding1 FacF_Crowding2 * Age Groups

Age Groups		FacF_Crowding1	FacF_Crowding2
Seniors	Mean	-,4305643	,1709011
	N	38	38
	Std. Deviation	1,38767913	1,02045930
Juniors + Adults	Mean	,0639119	-,0253681
	N	256	256
	Std. Deviation	,91536017	,99645628
Total	Mean	,0000000	,0000000
	N	294	294
	Std. Deviation	1,00000000	1,00000000

7.l ANNEX 12 - SPSS OUTPUTS FOR H10

Gender

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Gender	Statistic	df	Sig.	Statistic	df	Sig.
In global, the store environment/ atmosphere looks to you....	1	,374	216	,000	,666	216	,000
	2	,383	85	,000	,701	85	,000

a. Lilliefors Significance Correction

Store Format

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Store Format	Statistic	df	Sig.	Statistic	df	Sig.
In global, the store environment/ atmosphere looks to you....	Hiper	,415	150	,000	,662	150	,000
	Super	,405	151	,000	,671	151	,000

a. Lilliefors Significance Correction

Age Groups

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
In global, the store environment/ atmosphere looks to you....	Juniors	,401	85	,000	,679	85	,000
	Adults + Seniors	,374	216	,000	,677	216	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
In global, the store environment/ atmosphere looks to you....	Adults	,386	177	,000	,679	177	,000
	Juniors + Seniors	,409	124	,000	,671	124	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Age Groups	Statistic	df	Sig.	Statistic	df	Sig.
In global, the store environment/ atmosphere looks to you....	Seniors	,427	39	,000	,643	39	,000
	Juniors + Adults	,371	262	,000	,682	262	,000

a. Lilliefors Significance Correction

T-Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
In global, the store environment/ atmosphere looks to you....	Equal variances assumed	,003	,956	-,391	299	,696	-,029	,075	-,177	,118
	Equal variances not assumed			-,416	176,043	,678	-,029	,070	-,168	,110

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
In global, the store environment/ atmosphere looks to you....	Equal variances assumed	,979	,323	4,054	299	,000	,266	,066	,137	,396
	Equal variances not assumed			4,057	283,184	,000	,266	,066	,137	,395

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
In global, the store environment/ atmosphere looks to you....	Equal variances assumed	,055	,814	1,049	299	,295	,078	,075	-,069	,226
	Equal variances not assumed			1,138	184,243	,256	,078	,069	-,058	,215

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
In global, the store environment/ atmosphere looks to you....	Equal variances assumed	,896	,345	-2,206	299	,028	-,150	,068	-,284	-,016
	Equal variances not assumed			-2,297	294,354	,022	-,150	,065	-,279	-,021

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
In global, the store environment/ atmosphere looks to you....	Equal variances assumed	,698	,404	1,814	299	,071	,181	,100	-,015	,378
	Equal variances not assumed			2,110	56,545	,039	,181	,086	,009	,353

NPar Tests

Mann-Whitney Test

Test Statistics[a]

	In global, the store environment/ atmosphere looks to you....
Mann-Whitney U	9172,500
Wilcoxon W	32608,500
Z	-,014
Asymp. Sig. (2-tailed)	,989

a. Grouping Variable: Gender

Test Statistics[a]

	In global, the store environment/ atmosphere looks to you....
Mann-Whitney U	9132,500
Wilcoxon W	20608,500
Z	-3,739
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: Store Format

Test Statistics[a]

	In global, the store environment/ atmosphere looks to you....
Mann-Whitney U	8795,000
Wilcoxon W	32231,000
Z	-,729
Asymp. Sig. (2-tailed)	,466

a. Grouping Variable: Age Groups

Test Statistics[a]

	In global, the store environment/ atmosphere looks to you....
Mann-Whitney U	9899,500
Wilcoxon W	25652,500
Z	-1,862
Asymp. Sig. (2-tailed)	,063

a. Grouping Variable: Age Groups

Test Statistics[a]

	In global, the store environment/ atmosphere looks to you....
Mann-Whitney U	4419,500
Wilcoxon W	38872,500
Z	-1,751
Asymp. Sig. (2-tailed)	,080

a. Grouping Variable: Age Groups

Means

In global, the store environment/ atmosphere looks to you.... * Store Format

Mean

Store Format	In global, the store environment/ atmosphere looks to you....
Hiper	4,21
Super	3,94
Total	4,07

In global, the store environment/ atmosphere looks to you.... * Age Groups

Mean

Age Groups	In global, the store environment/ atmosphere looks to you....
Adults	4,01
Juniors + Seniors	4,16
Total	4,07

7.m ANNEX 13 - SPSS OUTPUTS FOR HA TO HP3

Hypotheses Ha

Descriptive Statistics

	Mean	Std. Deviation	N
The volume at which the music is playing is adequate	3,69	,821	136
The background music is pleasant	3,85	,676	136

Correlations

		The volume at which the music is playing is adequate	The background music is pleasant
The volume at which the music is playing is adequate	Pearson Correlation	1	,687**
	Sig. (2-tailed)		,000
	N	136	136
The background music is pleasant	Pearson Correlation	,687**	1
	Sig. (2-tailed)	,000	
	N	136	136

**. Correlation is significant at the 0.01 level (2-tailed).

Hypotheses Hb

Descriptive Statistics

	Mean	Std. Deviation	N
Were you aware of the existence of background music at the store?	1,55	,499	301
Do you intend to return to this store?	4,49	,545	301

Correlations

		Were you aware of the existence of background music at the store?	Do you intend to return to this store?
Were you aware of the existence of background music at the store?	Pearson Correlation	1	-,117*
	Sig. (2-tailed)		,042
	N	301	301
Do you intend to return to this store?	Pearson Correlation	-,117*	1
	Sig. (2-tailed)	,042	
	N	301	301

*. Correlation is significant at the 0.05 level (2-tailed).

Hypotheses Hc

Descriptive Statistics

	Mean	Std. Deviation	N
Were you aware of the existence of background music at the store?	1,55	,499	301
In global, the store environment/ atmosphere looks to you....	4,07	,584	301

Correlations

		Were you aware of the existence of background music at the store?	In global, the store environment/ atmosphere looks to you....
Were you aware of the existence of background music at the store?	Pearson Correlation	1	-,046
	Sig. (2-tailed)		,422
	N	301	301
In global, the store environment/ atmosphere looks to you....	Pearson Correlation	-,046	1
	Sig. (2-tailed)	,422	
	N	301	301

Hypotheses Hd

Descriptive Statistics

	Mean	Std. Deviation	N
The background music is pleasant	3,85	,676	136
Do you intend to return to this store?	4,49	,545	301

Correlations

		The background music is pleasant	Do you intend to return to this store?
The background music is pleasant	Pearson Correlation	1	-,026
	Sig. (2-tailed)		,767
	N	136	136
Do you intend to return to this store?	Pearson Correlation	-,026	1
	Sig. (2-tailed)	,767	
	N	136	301

Hypotheses He

Descriptive Statistics

	Mean	Std. Deviation	N
The background music is pleasant	3,85	,676	136
Would you recommend this store to family and friends and so on?	4,25	,553	301

Correlations

		The background music is pleasant	Would you recommend this store to family and friends and so on?
The background music is pleasant	Pearson Correlation	1	,073
	Sig. (2-tailed)		,398
	N	136	136
Would you recommend this store to family and friends and so on?	Pearson Correlation	,073	1
	Sig. (2-tailed)	,398	
	N	136	301

Hypotheses Hf

Hypothesis Hf1

Descriptive Statistics

	Mean	Std. Deviation	N
The background music is pleasant	3,85	,676	136
The waiting time to be attended at the service counter is reasonable	3,12	1,145	299

Correlations

		The background music is pleasant	The waiting time to be attended at the service counter is reasonable
The background music is pleasant	Pearson Correlation	1	-,042
	Sig. (2-tailed)		,632
	N	136	135
The waiting time to be attended at the service counter is reasonable	Pearson Correlation	-,042	1
	Sig. (2-tailed)	,632	
	N	135	299

Hypothesis Hf2

Descriptive Statistics

	Mean	Std. Deviation	N
The background music is pleasant	3,85	,676	136
The waiting time at the cashiers is reasonable	3,58	,841	299

Correlations

		The background music is pleasant	The waiting time at the cashiers is reasonable
The background music is pleasant	Pearson Correlation	1	,040
	Sig. (2-tailed)		,647
	N	136	135
The waiting time at the cashiers is reasonable	Pearson Correlation	,040	1
	Sig. (2-tailed)	,647	
	N	135	299

Hypotheses Hg

Hypothesis Hg1

Descriptive Statistics

	Mean	Std. Deviation	N
The volume at which the music is playing is adequate	3,69	,821	136
The waiting time to be attended at the service counter is reasonable	3,12	1,145	299

Correlations

		The volume at which the music is playing is adequate	The waiting time to be attended at the service counter is reasonable
The volume at which the music is playing is adequate	Pearson Correlation	1	-,138
	Sig. (2-tailed)		,112
	N	136	135
The waiting time to be attended at the service counter is reasonable	Pearson Correlation	-,138	1
	Sig. (2-tailed)	,112	
	N	135	299

Hypothesis Hg2

Descriptive Statistics

	Mean	Std. Deviation	N
The volume at which the music is playing is adequate	3,69	,821	136
The waiting time at the cashiers is reasonable	3,58	,841	299

Correlations

	The volume at which the music is playing is adequate	The waiting time at the cashiers is reasonable

The volume at which the music is playing is adequate	Pearson Correlation	1	-,055
	Sig. (2-tailed)		,523
	N	136	135
The waiting time at the cashiers is reasonable	Pearson Correlation	-,055	1
	Sig. (2-tailed)	,523	
	N	135	299

Hypotheses Hi

Hypothesis Hi1

Descriptive Statistics

	Mean	Std. Deviation	N
The light in the areas of fresh goods allows me to evaluate the quality of the products	3,92	,449	299
Do you intend to return to this store?	4,49	,545	301

Correlations

		The light in the areas of fresh goods allows me to evaluate the quality of the products	Do you intend to return to this store?
The light in the areas of fresh goods allows me to evaluate the quality of the products	Pearson Correlation	1	,066
	Sig. (2-tailed)		,252
	N	299	299
Do you intend to return to this store?	Pearson Correlation	,066	1
	Sig. (2-tailed)	,252	
	N	299	301

Hypothesis Hi2

Descriptive Statistics

	Mean	Std. Deviation	N
Do you intend to return to this store?	4,49	,545	301
The light at the corners of the store (more hidden areas) is sufficient	3,88	,488	299

Correlations

		Do you intend to return to this store?	The light at the corners of the store (more hidden areas) is sufficient
Do you intend to return to this store?	Pearson Correlation	1	,079
	Sig. (2-tailed)		,172
	N	301	299
The light at the corners of the store (more hidden areas) is sufficient	Pearson Correlation	,079	1
	Sig. (2-tailed)	,172	
	N	299	299

Hypothesis Hi3

Descriptive Statistics

	Mean	Std. Deviation	N
Do you intend to return to this store?	4,49	,545	301
The general light in the store is sufficient	3,99	,408	301

Correlations

		Do you intend to return to this store?	The general light in the store is sufficient
Do you intend to return to this store?	Pearson Correlation	1	,030
	Sig. (2-tailed)		,609
	N	301	301
The general light in the store is sufficient	Pearson Correlation	,030	1
	Sig. (2-tailed)	,609	
	N	301	301

Hypotheses Hj

Hypothesis Hj1

Descriptive Statistics

	Mean	Std. Deviation	N
The light in the areas of fresh goods allows me to evaluate the quality of the products	3,92	,449	299
In global, the store environment/ atmosphere looks to you....	4,07	,584	301

Correlations

		The light in the areas of fresh goods allows me to evaluate the quality of the products	In global, the store environment/ atmosphere looks to you....
The light in the areas of fresh goods allows me to evaluate the quality of the products	Pearson Correlation	1	,152**
	Sig. (2-tailed)		,009
	N	299	299
In global, the store environment/ atmosphere looks to you....	Pearson Correlation	,152**	1
	Sig. (2-tailed)	,009	
	N	299	301

**. Correlation is significant at the 0.01 level (2-tailed).

Hypothesis Hj2

Descriptive Statistics

	Mean	Std. Deviation	N
In global, the store environment/ atmosphere looks to you....	4,07	,584	301
The light at the corners of the store (more hidden areas) is sufficient	3,88	,488	299

Correlations

		In global, the store environment/ atmosphere looks to you....	The light at the corners of the store (more hidden areas) is sufficient
In global, the store environment/ atmosphere looks to you....	Pearson Correlation	1	,161**
	Sig. (2-tailed)		,005
	N	301	299
The light at the corners of the store (more hidden areas) is sufficient	Pearson Correlation	,161**	1
	Sig. (2-tailed)	,005	
	N	299	299

**. Correlation is significant at the 0.01 level (2-tailed).

Hypothesis Hj3

Descriptive Statistics

	Mean	Std. Deviation	N
In global, the store environment/ atmosphere looks to you....	4,07	,584	301
The general light in the store is sufficient	3,99	,408	301

Correlations

		In global, the store environment/ atmosphere looks to you....	The general light in the store is sufficient
In global, the store environment/ atmosphere looks to you....	Pearson Correlation	1	,156**
	Sig. (2-tailed)		,007
	N	301	301
The general light in the store is sufficient	Pearson Correlation	,156**	1
	Sig. (2-tailed)	,007	
	N	301	301

**. Correlation is significant at the 0.01 level (2-tailed).

Hypotheses Hk

Descriptive Statistics

	Mean	Std. Deviation	N
The corridors in the store are spacious and allow a good circulation	3,77	,655	301
The number of customers at the store at the moments of higher flow is ...	3,33	,887	296

Correlations

		The corridors in the store are spacious and allow a good circulation	The number of customers at the store at the moments of higher flow is ...
The corridors in the store are spacious and allow a good circulation	Pearson Correlation	1	,022
	Sig. (2-tailed)		,710
	N	301	296
The number of customers at the store at the moments of higher flow is ...	Pearson Correlation	,022	1
	Sig. (2-tailed)	,710	
	N	296	296

Hypotheses Hl

Hypothesis Hl1

Descriptive Statistics

	Mean	Std. Deviation	N
The waiting time to be attended at the service counter is reasonable	3,12	1,145	299
When I need help, I can easily find an employee shop assistant	3,65	,920	299

Correlations

		The waiting time to be attended at the service counter is reasonable	When I need help, I can easily find an employee shop assistant
The waiting time to be attended at the service counter is reasonable	Pearson Correlation	1	,080
	Sig. (2-tailed)		,166
	N	299	298
When I need help, I can easily find an employee shop assistant	Pearson Correlation	,080	1
	Sig. (2-tailed)	,166	
	N	298	299

Hypothesis Hl2

Descriptive Statistics

	Mean	Std. Deviation	N
When I need help, I can easily find an employee shop assistant	3,65	,920	299
The waiting time at the cashiers is reasonable	3,58	,841	299

Correlations

		When I need help, I can easily find an employee shop assistant	The waiting time at the cashiers is reasonable
When I need help, I can easily find an employee shop assistant	Pearson Correlation	1	,553**
	Sig. (2-tailed)		,000
	N	299	298
The waiting time at the cashiers is reasonable	Pearson Correlation	,553**	1
	Sig. (2-tailed)	,000	
	N	298	299

**. Correlation is significant at the 0.01 level (2-tailed).

Hypothesis Hl3

Descriptive Statistics

	Mean	Std. Deviation	N
The waiting time to be attended at the service counter is reasonable	3,12	1,145	299
The number of customers at the store at the moments of higher flow is ...	3,33	,887	296

Correlations

		The waiting time to be attended at the service counter is reasonable	The number of customers at the store at the moments of higher flow is ...
The waiting time to be attended at the service counter is reasonable	Pearson Correlation	1	-,431**
	Sig. (2-tailed)		,000
	N	299	294
The number of customers at the store at the moments of higher flow is ...	Pearson Correlation	-,431**	1
	Sig. (2-tailed)	,000	
	N	294	296

**. Correlation is significant at the 0.01 level (2-tailed).

Hypothesis Hl4

Descriptive Statistics

	Mean	Std. Deviation	N
The number of customers at the store at the moments of higher flow is ...	3,33	,887	296
The waiting time at the cashiers is reasonable	3,58	,841	299

Correlations

		The number of customers at the store at the moments of higher flow is ...	The waiting time at the cashiers is reasonable
The number of customers at the store at the moments of higher flow is ...	Pearson Correlation	1	-,133*
	Sig. (2-tailed)		,023
	N	296	294
The waiting time at the cashiers is reasonable	Pearson Correlation	-,133*	1
	Sig. (2-tailed)	,023	
	N	294	299

*. Correlation is significant at the 0.05 level (2-tailed).

Hypotheses Hm

Hypothesis Hm1

Descriptive Statistics

	Mean	Std. Deviation	N
The waiting time to be attended at the service counter is reasonable	3,12	1,145	299
Do you intend to return to this store?	4,49	,545	301

Correlations

		The waiting time to be attended at the service counter is reasonable	Do you intend to return to this store?
The waiting time to be attended at the service counter is reasonable	Pearson Correlation	1	,118*
	Sig. (2-tailed)		,041
	N	299	299
Do you intend to return to this store?	Pearson Correlation	,118*	1
	Sig. (2-tailed)	,041	
	N	299	301

*. Correlation is significant at the 0.05 level (2-tailed).

Hypothesis Hm2

Descriptive Statistics

	Mean	Std. Deviation	N
Do you intend to return to this store?	4,49	,545	301
The waiting time at the cashiers is reasonable	3,58	,841	299

Correlations

		Do you intend to return to this store?	The waiting time at the cashiers is reasonable
Do you intend to return to this store?	Pearson Correlation	1	-,111
	Sig. (2-tailed)		,055
	N	301	299
The waiting time at the cashiers is reasonable	Pearson Correlation	-,111	1
	Sig. (2-tailed)	,055	
	N	299	299

Hypotheses Hn

Hypothesis Hn1

Descriptive Statistics

	Mean	Std. Deviation	N
Would you recommend this store to family and friends and so on?	4,25	,553	301
The waiting time to be attended at the service counter is reasonable	3,12	1,145	299

Correlations

		Would you recommend this store to family and friends and so on?	The waiting time to be attended at the service counter is reasonable
Would you recommend this store to family and friends and so on?	Pearson Correlation	1	,081
	Sig. (2-tailed)		,162
	N	301	299
The waiting time to be attended at the service counter is reasonable	Pearson Correlation	,081	1
	Sig. (2-tailed)	,162	
	N	299	299

Hypothesis Hn2

Descriptive Statistics

	Mean	Std. Deviation	N
Would you recommend this store to family and friends and so on?	4,25	,553	301
The waiting time at the cashiers is reasonable	3,58	,841	299

Correlations

		Would you recommend this store to family and friends and so on?	The waiting time at the cashiers is reasonable
Would you recommend this store to family and friends and so on?	Pearson Correlation	1	,138*
	Sig. (2-tailed)		,017
	N	301	299
The waiting time at the cashiers is reasonable	Pearson Correlation	,138*	1
	Sig. (2-tailed)	,017	
	N	299	299

*. Correlation is significant at the 0.05 level (2-tailed).

Hypotheses Ho

Hypothesis Ho1

Descriptive Statistics

	Mean	Std. Deviation	N
When I need help, I can easily find an employee shop assistant	3,65	,920	299
Do you intend to return to this store?	4,49	,545	301

Correlations

		When I need help, I can easily find an employee shop assistant	Do you intend to return to this store?
When I need help, I can easily find an employee shop assistant	Pearson Correlation	1	-,077
	Sig. (2-tailed)		,185
	N	299	299
Do you intend to return to this store?	Pearson Correlation	-,077	1
	Sig. (2-tailed)	,185	
	N	299	301

Hypothesis Ho2

Descriptive Statistics

	Mean	Std. Deviation	N
When I need help, I can easily find an employee shop assistant	3,65	,920	299
In global, the store environment/ atmosphere looks to you....	4,07	,584	301

Correlations

		When I need help, I can easily find an employee shop assistant	In global, the store environment/ atmosphere looks to you....
When I need help, I can easily find an employee shop assistant	Pearson Correlation	1	,215**
	Sig. (2-tailed)		,000
	N	299	299
In global, the store environment/ atmosphere looks to you....	Pearson Correlation	,215**	1
	Sig. (2-tailed)	,000	
	N	299	301

**. Correlation is significant at the 0.01 level (2-tailed).

Hypotheses Hp

Hypothesis Hp1

Descriptive Statistics

	Mean	Std. Deviation	N
The number of customers waiting at the service counters in the moment of higher flow is ...	3,34	,890	294
In global, the store environment/ atmosphere looks to you....	4,07	,584	301

Correlations

		The number of customers waiting at the service counters in the moment of higher flow is ...	In global, the store environment/ atmosphere looks to you....
The number of customers waiting at the service counters in the moment of higher flow is ...	Pearson Correlation	1	,031
	Sig. (2-tailed)		,591
	N	294	294
In global, the store environment/ atmosphere looks to you....	Pearson Correlation	,031	1
	Sig. (2-tailed)	,591	
	N	294	301

Hypothesis Hp2

Descriptive Statistics

	Mean	Std. Deviation	N
The number of customers at the store at the moments of higher flow is ...	3,33	,887	296
Would you recommend this store to family and friends and so on?	4,25	,553	301

Correlations

		The number of customers at the store at the moments of higher flow is ...	Would you recommend this store to family and friends and so on?
The number of customers at the store at the moments of higher flow is ...	Pearson Correlation	1	-,102
	Sig. (2-tailed)		,079
	N	296	296
Would you recommend this store to family and friends and so on?	Pearson Correlation	-,102	1
	Sig. (2-tailed)	,079	
	N	296	301

Hypothesis Hp3

Descriptive Statistics

	Mean	Std. Deviation	N
The number of customers at the store at the moments of higher flow is ...	3,33	,887	296
In global, the store environment/ atmosphere looks to you....	4,07	,584	301

Correlations

		The number of customers at the store at the moments of higher flow is ...	In global, the store environment/ atmosphere looks to you....
The number of customers at the store at the moments of higher flow is ...	Pearson Correlation	1	,059
	Sig. (2-tailed)		,316
	N	296	296
In global, the store environment/ atmosphere looks to you....	Pearson Correlation	,059	1
	Sig. (2-tailed)	,316	
	N	296	301