



DISSERTATION

THE EFFECT OF GENDER (IN)CONGRUENT AMBIENT SCENT ON MALE
AND FEMALE CONSUMER PURCHASING BEHAVIOR

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After seven months of tense but interesting work I finished my master dissertation about gender congruent and incongruent ambient scent and its effect on male and female consumer purchasing behavior.

In the course of writing the work, I more and more discovered the new, interesting and useful knowledge for me.

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TABLE OF CONTENT

ABSTRACT	5
1. INTRODUCTION	7
2. ACADEMIC LITERATURE REVIEW.....	11
2.1 CONGRUENCE CONDITION.....	19
2.2 GENDER.....	21
2.3 LOYALTY	23
3. CONCEPTUAL FRAMEWORK AND HYPOTHESES.....	25
4. METHODOLOGY AND DATA COLLECTION	29
4.1 RESEARCH METHOD	29
4.2 SAMPLING.....	30
4.4 QUESTIONNAIRE DESIGN AND VARIABLE DESCRIPTION	32
4.5 STIMULI DEVELOPMENT.....	33
5. ANALYSIS AND RESULTS.....	33
5.1 SAMPLE CHARACTERIZATION	34
5.2 SCALE RELIABILITY	34
5.3 MAIN RESULTS.....	36
6. CONCLUSIONS AND IMPLICATIONS.....	39
6.1 PRACTICAL AND THEORETICAL IMPLICATIONS.....	41
6.2 LIMITATIONS AND FUTURE RESEARCH.....	41
APPENDICES.....	43
APPENDIX 1: SURVEY QUESTIONNAIRE (English)	43
APPENDIX 2: SURVEY QUESTIONNAIRE (Portugues)	44
APPENDIX 3: SAMPLE CHARACTERISTICS	44
APPENDIX 4: SCHEDULE OF EXPERIMENT DATA COLLECTION IN SHOP1ONE ROSSIO	45
REFERENCES.....	47

LIST OF FIGURES

Figure 1 – Conceptual model.....	14
Figure 2 – Sensory marketing model.....	17
Figure 3 – Conceptual Framework	26

LIST OF TABLES

Table 1 – Table of references	24
Table 2 – Reliability Test for Multi-Item Scales	36
Table 3 – Results Main Effect of Congruence Condition	37
Table 4 – Results Two-Way Interaction Gender x Store Department.....	38

ABSTRACT

Sensory marketing with its correct and competent use can be an effective way to attract consumers to the store environment. The store ambient scent can influence the creation of a pleasant atmosphere in the store that will prompt the consumer to purchasing behaviour. The aim of this study is to extend scent marketing research: (i) by analyzing the effect of a gender-congruent and incongruent ambient scent on consumer purchasing behavior; and (ii) by exploring how does the gender-congruent and incongruent ambient scent affect consumer purchasing behavior depending on the consumers' gender difference.

A field experiment with 120 participants has showed that an incongruent ambient scent affects the increase in actual purchases of consumers but the results haven't confirmed the assumption of the positive impact on the perception of the store quality and perception of the product quality. There weren't found significant gender differences in loyalty observed between the corresponding male and female store departments. There was found that gender differences and the type of the store department influence on the extent to which congruent and incongruent scent motivate consumers to spend money on the store.

Keywords: Congruent, Incongruent, Ambient scent, Gender, Consumer behavior.

SUMÁRIO EXECUTIVO

O marketing sensorial, com seu uso correto, pode ser uma maneira eficaz de atrair os consumidores para o ambiente da loja. O aroma da loja pode influenciar a criação de um ambiente agradável, que levará o consumidor ao comportamento de compra. O objetivo deste estudo é estender a pesquisa de marketing de odores: (i) Analisando o efeito de um perfume ambiental congruente ao gênero e incongruente no comportamento de compra do consumidor; (ii) Explorando como o perfume ambiental congruente e incongruente ao gênero afeta o comportamento de compra do consumidor, dependendo da diferença de gênero entre os consumidores.

Em uma experiência de campo com 120 participantes mostrou que um cheiro ambiente incongruente afeta o aumento nas compras dos consumidores, mas os resultados não confirmaram a suposição do impacto positivo na percepção da qualidade da loja e na percepção da qualidade do produto. Não foram encontradas diferenças significativas de gênero na lealdade observada entre os departamentos de loja masculinos e femininos. Verificou-se que as diferenças entre os sexos e o tipo de departamento de loja influenciam na medida em que o perfume congruente e incongruente motiva os consumidores a efectuar compras na loja.

Palavras-chave: Congruente, Incongruente, Ambiente, Gênero, Comportamento do consumidor.

1. INTRODUCTION

This dissertation considers the presence of relationships between store scent and consumer behavior. The main purpose of this dissertation is to analyze the effect of gender congruent and gender incongruent ambient scent on male and female consumer purchasing behavior, customer loyalty and perceived quality of the store and of the products, by using a gender-congruent and incongruent ambient scent in Portuguese clothing store Shop1one. This paper proposes that store scent has a significant effect on a shopping experience, it can increase the amount of items that customers purchase and that consumer's experience differs depending on gender.

The most important component of visual merchandising is a store atmospherics. One early definition of store atmospherics calls them "buying environments [designed] to produce specific emotional effects in the buyer that enhance his purchase probability" (Kotler, 1973, p.50).

American Marketing Association (AMA) defined the sensory marketing as a marketing technique that aim to seduce the consumer by using his senses to influences his feeling and behavior (Valenti & Riviere, 2008).

Pleasant ambient scents can positively influence consumer behavioural reactions (Bitner, 1992; Gulas and Bloch, 1995; Bone and Ellen, 1999). And congruity between the scent and the store products is a main regulator of the scent effects on consumers' reactions. The various conducted studies (Bosmans, 2006; Spangenberg, Crowley & Henderson, 1996; Doucé, Poels, Janssens, & De Backer, 2013; Ward, Davies & Kooijman, 2003, 2007; Morrin & Ratneshwar 2000; Guéguen & Petr 2006; Bambauer-Sachse, 2012; Jacob, Stefan, & Guéguen, 2014) have found that congruent or pleasant ambient scents improve consumers' evaluation and approach behaviour more when the scent is incongruent. However, based on the studies of (Bosmans, 2006; Spangenberg, Sprott, Grohmann & Tracy, 2006,; Doucé et al., 2013) that state that both congruent and incongruent ambient scents have positive effects on consumer behaviour this study suggests that incongruent scent have a positive effect on consumer purchasing behaviour.

Spangenberg, Crowley and Henderson (1996, p. 67) defined ambient scent as “scent that is not emanating from a particular object but is present in the environment”. Wilkie (1995) noted in his seminar work that scent as one of the five senses is considered to be the most closely attached to emotional reactions because the olfactory bulb is directly connected to the limbic system in the brain, which is the seat for immediate emotion in humans, so smell perception and interpretation is a complex phenomenon that involves a mixture of biological responses and psychology (Roxana and Ioan, 2013).

Scent is one of the most influential ambient elements. It has the strongest connection with the brain (Mitchell, Kahn & Knasko, 1995). According to Spangenberg, Grohmann & Sprott (2005) the extent to which a scent is appropriate (congruent) or not appropriate (incongruent) to the environment effects on consumers' evaluation of the environment. Spangenberg, Crowley and Henderson (1996) investigated the effect of ambient scent on the perceived time duration.

Akram, Hui and Hashim (2016) in their article explore the relationship between store atmosphere and impulse buying behavior and also examine how demographic variables such as age, gender, and education affect the relationship between store atmosphere and impulse buying behavior.

According to the fact that women are more emotionally sensitive than men, may be some differences in their consumer behavior (Banat & Wandebori, 2012).

The aim of this dissertation is to focus the difference between male and female consumer purchasing behavior depending on the congruent and incongruent ambient scent as one of the atmospheric factors.

The research questions are:

RQ1: What is the effect of a gender-congruent and incongruent ambient scent on consumer purchasing behavior in a Portuguese clothing store?

RQ2: How does the gender-congruent and incongruent ambient scent affect consumer quality perception of a Portuguese clothing store and its products?

RQ3: How does the gender-congruent and incongruent ambient scent affect

consumer purchasing behavior depending on the gender difference in a Portuguese clothing store?

The application field is the Portuguese clothing store Shop1one. Shop1One is a Portuguese clothing brand with male and female departments. The store is located in the center of Lisbon, so it is popular among the population of the country as well as among tourists.

It is important that retail stores effectively use the store's capabilities to distinguish themselves from competitors, and also provide consumers with a pleasant shopping experience.

To perform the field experiment study there was conducted a pretest to choose two smells of diffusers that will be used in the store for experiment

In this study we used the experimental research methodology for measure and quantify the impact of scent as an atmosphere variable on consumer purchasing behavior and perception of the quality depending on gender. We conducted a field experimental development using a preexisting self-administered questionnaire (Fredriksson & Lina Thuvander, 2015).

The data analysis was provided the result from the questionnaire using the SPSS application and MANOVA analysis of variance. The result was presented in quantitative analysis to show the relationship between independent and dependent variables.

The findings of the study will be important to researchers and the academia as it will add to the existing body of knowledge on retail store atmospherics.

They also help retailers to establish functioning and stable customer experience management strategies, and create effective ways to eliminate factors that create problems in the implementation and adaptation of such strategies.

Men and women react differently to the same type of scent in the store, it is very important to know the difference between them. Producers must understand the behavior of consumers in order to satisfy their needs and desires. Understanding consumer behavior can help a company to better satisfy the customer thereby the

company will make a greater profit.

The dissertation includes the following chapters:

Introduction: This chapter focuses on the topic, the problem, the central goal and the research questions and contributions to academic and managerial fields.

Literature review: This chapter provides an in depth review of literature on aspects relevant to this study such as research on scent and scent in retail environment and concludes with a description of how the framework for this study was developed. There was proposed the research hypotheses according to the previous studies.

Methodology: This chapter provides definition of research objectives, systematic explanation of the strategy, methods and technique used in the retail clothing stores and also for analyses of collected data.

Data Analysis and Discussion: This chapter aims at analyzing and presenting the results obtained on the empirical field. The evidence provides the rationale for the contribution of work in the current state of knowledge of the subject under study. The results of this study are compared with the previous ones.

Conclusions: A summary on the central line of argument of the work and also theoretical and methodological implications that may derive from it. The limitations and proposals of this study for the future academic works were provided. Also there were presented answers to research questions and their competitive analysis with the previous studies.

2. ACADEMIC LITERATURE REVIEW

The following chapter provides review of literature on aspects relevant to this study such as an introduction to the atmospherics and sense marketing with focus on ambient congruent and incongruent scent.

SENSORY MARKETING

The store environment plays an important role in influencing consumers' emotions and behavior. The physical environment includes various environmental elements that influence consumers' behavior. These environmental components are also known as atmospherics. Atmospherics affect how consumers make decisions and influence the perception and evaluation of products and brands. The atmosphere characterizes the quality of the environment and can be used to create a consumer experience (Kotler, 1973).

Store atmospherics affect consumer behavior and this statement has created a revolution in sensory marketing techniques, such that, retailers and manufacturers seek to influence the consumer's "sensory experience" (Spence, Puccinelli, Grewal & Roggeveen, 2014).

According to Spence, Puccinelli & Grewal (2014) cit. in Utriainen (2017) store atmospherics obviously influence shoppers in various ways and according to numerous studies experience economy and sensory marketing are very appealing to today's consumers. Various independent atmospherics including visual, tactile, auditory and gustatory atmospherics influence shoppers' behaviors and perceptions, but their combined influence is very possibly even greater than the sum of their parts. The retailer has to be careful in using multiple senses at once though and try to keep congruence between the atmospherics. An increasing number of marketers have adapted the practice to differentiate their stores with a specific fragrance, specific sound, specific visual outlook or a specific feel. Doing this congruently should offer benefits in increased sales and profits.

Sensory marketing is a kind of marketing that directly affects the sense organs of the consumer in order to stimulate certain actions. This type of marketing develops

a certain reflex-association in a person - a clear matching of melodies, colors, sounds, smells, textures with a certain brand. When exposed to the consumer all senses are used - touch, smell hearing, taste and vision. The main task of sensory marketing is to create positive images and associations with the brand at the time of purchase and improve the customer's mood (Olshevskiy, 2014).

The creator of sensory marketing is Martin Lindstrom, a well-known marketing consultant and an expert in the field of brands. His idea (Lindstrom, 2010) is that traditional marketing techniques no longer bring the expected results. The consumer ceases to respond to the classic forms of advertising, demanding new approaches to attract his attention. He believes that branding needs to be reoriented to visual-auditory perception and send signals and messages using all the senses. Information received through sensory perception channels remains in the long-term memory and is used in making purchasing decisions in the future (Olshevskiy, 2014).

Today sensory marketing is distinguished from mass and relationship marketing by having its beginning in the five human senses (Hulten, Broweus and Dijk, 2009). According to Krishna (2010, p.2) sensory marketing is "marketing that engages the consumers' senses and affects their behaviors".

According to Ulyanovskiy (2008) the goal of sensory marketing is to create a pleasant atmosphere and a relaxing environment for the buyer. Sensory marketing tools are: various sounds, smells, colors, textures, under the influence of which the consumer develops a reflex-association. Certain music or feelings immediately evoke memories of a particular brand.

Information about the product, obtained through various channels of sensory perception, remains in the long-term memory and is used in making the purchasing decision. Each brand should have such properties that would create a rich sensory and emotional experience of interaction with it. The popularity of sensory marketing is growing in all areas of trade. But especially it is effective in the field of retail. The concept of Emotional selling proposition (ESP) comes in place of the Unique selling proposition (USP). According to this concept, the use of color, sound, smell and all kinds of tactile stimuli will find a response in the hearts of consumers (Aleshina, 1999).

Sensory marketing gives customers special sensations. Having succumbed to the magic of colors, sounds and aromas, plunging into a pleasant atmosphere, leaving in his mind the best associations from the buying process, customer will definitely want to return to the seller. By using elements individually or all at once, strong emotional connections with the consumer are created that ensure the success of the brand (Belinskaya, 2013). Also Belinskaya (2013) noticed that the uniqueness of sensory marketing is that you can influence the audience both by direct contact in the sales area and through advertising, sending customers not so much the rational motives of the purchase, but how much an emotional call to recall, feel, touch.

Lindstrom (2010) has conducted studies on the effects that the tools of sensory marketing have on the buyer: these show that a pleasant sound can increase the desire to purchase goods by 65%. Taste accelerates the growth of the readiness to purchase by 23%, a pleasant smell by 40%. A product which is soft at touch has 26% more chances to be bought, and one pleasant to the eye has 46%. Summing up, Lindstrom has obtained the following result: the cumulated effect of all senses should increase the customer's willingness to purchase by 200% (Enache & Moroza, 2016, p.182).

Based on creating a brand concept and brand image, sensory marketing creates an perfect synergy between the product or service and the customer thereby creating a higher level of consumption. This type of marketing strategy is considered more emotional than rational, as it is developed from the customer perspective, it focuses on providing solutions and results, not just on products; it is based on cooperation with customers and the company to create emotional value (Lindstrom 2011).

Sensory marketing aims to create a positive experience through five human feelings, forcing consumers to "fall in love" before, during and after making a purchasing decision; it is important to know the brand and how this new wave can help solve new marketing problems (Hulten, 2009).

Lindstrom (2007) considers the manifestation of emotional deepness, which goes beyond the visible, tangible, material characteristics of the product as the fundamental strategy of sensory marketing, because in this way the brand will improve

its understanding and strengthen customer loyalty.

Five senses play a key role in human life and upon ever-growing increase of products with various brands, it is important to apply senses for establishing brand. A customer is often attracted towards a brand based upon its sensory experience (Maymand, Ahmadinejad, Nezami, 2012). Figure 1 describes the five sense impact on consumer behavior.

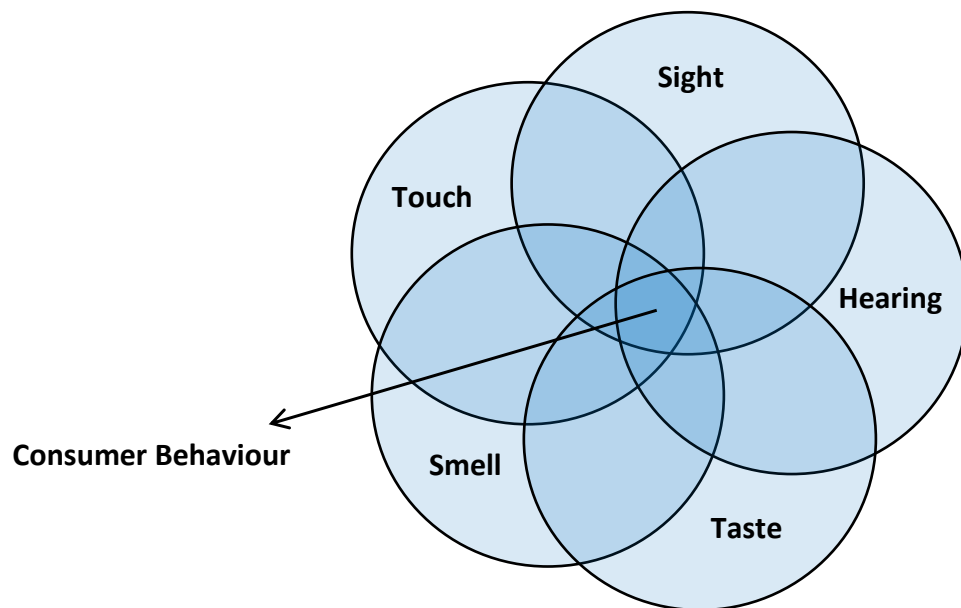


Figure1: Conceptual model derived from (Hulten, Brauvs and Van Dyke, 2012)

Sight

According to Jayakirishna (2013) sight is a dominant sensory system and the strongest sense used in marketing; more than 80% of the commercial and shopping communications are done through the sight sense. And there is a challenge for managers to make a visually attractive images and messages understandable by the consumer. Logos, colors, packaging and designing product are examples of visual stimuli that can be part of any brand strategy (Hulten, 2013). Manenti (2013) set an example of the classical Maslow's pyramid of needs, where the search for aesthetics is an existential need, which expressed after the primary needs are satisfied, it is the "aspiration of beauty». The sight was the first sense used in marketing, with codes of

colors improving the mood and shapes often used in communication and the positioning by the work on logos, typographies, and packages. Currently, other aspects are also being studied, such as shining, transparency, reflects, textures, etc.

Manenti (2013) describe vision as being the most important comparing all the senses. This is explained by responding times of the visual system are very short, and it is mainly due to visual information that animals and humans chose their food, recognize their kind, judge the danger of a situation. Thus, vision is over all the senses. We trust more our eyes rather than our other sensitive organs, and in case of doubt, the vision is more important than the rest.

Hearing

Hulten, Broweus and Dijk (2009) noted that most companies are completely aware that sound is regarded as strategy for developing identity and image of a brand. If the sound applies consciously, company has great opportunities for beneficial using a sound to distinguish its brand. Sound influences on our judgments and comments in relation to product and service that we intend to purchase and on behavior and habit of purchase (Lindstrom, 2005).

Alpert M. and Alpert J. with Maltz (2005) state that sound have long been recognized as an important factor of positive effects on mood, preferences and consumer behavior. Companies should use sound as an efficient tool for communicating with the unconscious needs of the consumer to increasing their purchase behaviour. Lindstrom (2005) emphasize the influence of sound effect on our shopping habits.

Touch

The findings (Lindstrom, 2005) indicate that touch sense associated with brand building has 25% share. Touching the products positively affects customer behavior and shopping attitude (Peck and Wiggins, 2006). Touch offers the most numerous perspectives because it is still undervalued and covers a wide range of sensations, from the touch itself (touch of surface, of contact) to haptic sensations (perceived thanks to moves and dynamic body interactions). The skin is the largest organ of the

body and people are instantly alert to pain, cold, heat, pressure (Manenti, 2013, p. 25).

According to Lindstrom (2010) there are fifty receptors per 100 square millimeters each containing 640.000 micro receptors in the brain, dedicated to the senses. As humans get older, these numbers decrease and lose certain sensitivity in the hands. However, the need for touch remains the same. Touch can create familiarity with a product: it is a sense of proximity, which opens an access to one's intimacy, thus the choice of materials is important, even more with intimate products like lingerie.

Taste

Taste is detected by special structures: taste buds. The human has about ten thousand taste buds, but everyone perceives taste differently. It is believed that women are more sensitive to taste than men, because they have more taste buds (Lindstrom, 2010).

In areas where there is fierce competition among the food companies and accordingly marketers of food products, using an intuitive expression of good taste is an effective way to influence consumer behavior. It is highly significant for companies that use marketing through the palate, they can be persuasive for the consumer (Sayadi, Mobarakabadi and Hamidi, 2015, p.102).

Smell

The sense of smell involves 45% communication with the brand (Kotler, 1973 and Lindstrom, 2005). Thus, Maymand, Ahmadinejad, and Nezami (2012) state that sense of smell is very close to our emotions and it has a great influence on our behavior. Sense of smell is very close to our emotions therefore the perfumes have great influence on our emotions, in fact smelling scent is sometimes accompanied with our emotional experiences and remembers memorable images in mind of customer and create image of brand either for short term or long term. This event can happen through short term marketing activities which shows role of scent for paying attention to product or brand or long term strategies that turns perfume as important element for determining identity of a company (Hulten, Broweus, and Dijk 2009).

Fig. 2 shows conceptual framework of sensory strategy, which suggests sensory marketing, as an application of the understanding of sensation and perception to the field of marketing. Consistent with it author highlights the difference between sensation and perception (Krishna, 2011). Fig. 2 presents the process which contains all the sensation elements which create perception. Further, the perception creates emotion and cognition which then define consumer's attitude, learning and memory, and behavior. By using sensory marketing strategy based on this model, marketers are supposed to differentiate their products in a highly individualized manner so as to exert an influence on consumer behavior (Krishna, 2012).

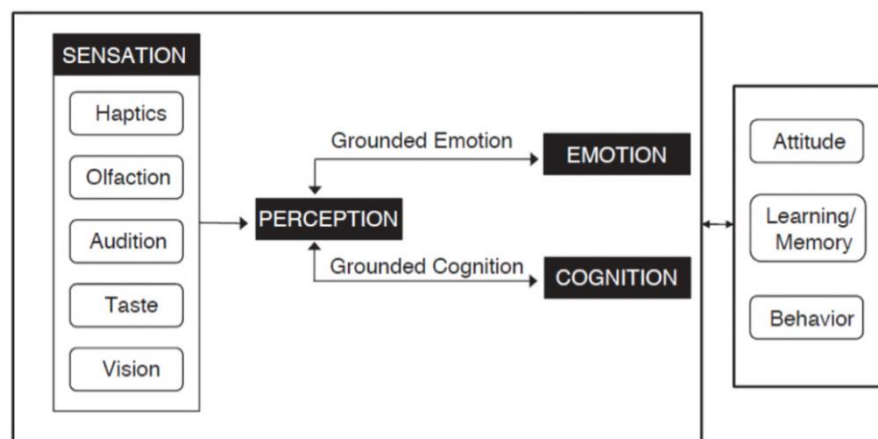


Figure 2: Sensory marketing model (Krishna, 2011)

Krishna (2011) interpret sensory marketing as an application of the understanding of sensation and perception to the field of marketing —to consumer perception, cognition, emotion, learning, preference, choice, or evaluation. From a research perspective, sensory marketing implies an understanding of sensation and perception as it applies to consumer behavior. In the study, we pay attention to author's interpretation of olfaction. Krishna (2011) focuses the discussion of smell on the connection between smell, memory and learning.

Scent

Research on physiological connection of smell has been done within the basic sciences, psychology, and recently in marketing. The Krishna's (2011) study identifies several biological reasons for why scent-encoded information may last for longer

stretches of time versus information encoded along with other sensory cues.

As studies (Herz & Engen, 1996; Cahill, Babinsky, Markowitsch & McGaugh, 1995; Eichenbaum, 1996) show only three synapses lie between the olfactory nerve and the hippocampus, again making the relationship between scent and memory significantly strong. The transfer of olfactory information thus differs from that of the other senses, none of which have as direct a connection to memory.

In support of this, Buck (2005) says people are able to distinguish among so many different scents. This tells us that there are number of receptors in humans' physiological makeup which devoted to processing incoming olfactory versus visual sensory input. Humans have the ability to recognize as many as 10,000 different scent combinations (Buck & Axel, 1991). They have the ability to distinguish between different flavors and recognize smells that have been felt earlier, even after long periods of time (Schab & Crowder, 1995).

Speaking of the memory of the scent itself, we can note that according to Engen, Kuisma, & Eimas (1973) cit. in Krishna (2011) research has been given a number of studies that show people's ability to recognize smells that they encountered earlier is retained for very long periods of time, with a minimum reduction in recognition accuracy.

We can also note the relationship between scent and auto-biographical memories. In the study (Krishna, 2011) author gives examples of findings which provide the information about ability of scent cues, versus cues from other sensory modalities, to evoke autobiographical memories, or memories for events that have taken place long ago.

According to Mitchell, Kahn, and Knasko (1995) cit. in Krishna (2011) ambient odors result in memories and affect elaboration on product information and choice. They find no effect of smell versus no smell on memory, but that memory with a congruent odor is higher than that with an incongruent odor.

Author (Krishna, 2011) also notes the studies (Mitchell et al., 1995) that have found that pleasant scents increase variety-seeking behavior.

Mattila and Wirtz (2001) show when the arousing qualities of scent and music are congruent, it improves approach behaviors. Krishna, Lwin and Morrin (2010) examine how one sense can affect the imagery of another. They show that smell can increase visual imagery—one can remember better a picture one saw if the object with the picture also had a smell.

2.1 CONGRUENCE CONDITION

The level at which the odor is appropriate (congruent) or not appropriate (incongruent) to the surrounding environment affects the consumers' assessment of the environment (Spangenberg, Grohmann & Sprott, 2005).

Morrin and Ratneshwar (2000) investigated the effects of ambient scent on evaluation, attention and memory for unfamiliar brands. They concluded that in a pleasantly scented environment, respondent's memory and attention has been improved to brand stimuli. The most interesting moment is that the impact of congruent and incongruent ambient scent was the same on brand recognition.

The olfactory literature has several important issues one of them is the congruency of scent with the product and the environment that plays in a vital role in formation the consumer's attitude and emotions. It is proposed that rather than the simple congruent/incongruent dichotomy, there is a competing proposition that allows associate some scents like an environment and to have a positive relationship with consumer affect and behavior similar to the relationship which congruent scents have (Wirtz, Mattila and Tan, 2007).

Actual purchase

Mitchell et al. (1995) argue for the importance of congruence between the ambient scent and the product class. Doucé et al. (2013) strengthen this position that by asserting that scent only has a positive effect when it is congruent with the product, even though the product itself does not originally have any inherent scent. However, Doucé et al. (2013) in their study used the chocolate ambient scent in a bookstore, which was perceived to be thematic-congruent with romantic literature and

cookbooks. The obtained results showed that chocolate scent had a positive influence considering the thematic-congruent books on the general approach behavior, meanwhile, a negative influence on the goal-directed behavior. But, in comparison to the controlled conditions, the sales of the thematic-incongruent books increased as well. So, the findings of Doucé et al. (2013) show that scent had a positive effect on sales for both the thematic-congruent and incongruent books in comparison to the non-scented conditions. The studies of Bosmans (2006) also confirm that both congruent and incongruent ambient scents have positive effects on product evaluation, given that the incongruent scent is not salient in the environment. In addition, the findings of Doucé et al. (2013) show women are more likely to approach behavior during congruent conditions.

The store environment has the effect on consumer purchasing behavior and their emotional state (Sherman, Mathur & Smith, 1997). Donovan Robert and Rossiter (1982) in their study state that the approach behavior of spending money in the store is mostly affected by the cognitive factors, but, it is argued that store-induced pleasure or simple affect could also change the consumer original intention of spending money.

The emotional stimuli that people perceive from the store environment could lead to consumers spending more money than they planned, but not in all cases. For example, in one case, Chebat & Michon (2003) did not find any significant effect between consumers spending in a mall environment. Nevertheless, in another case, Hirsch (1995) used two distinctly different pleasant odors in a casino located in Las Vegas. And the result indicated that one of the pleasant odors had a significant positive effect on the money gambled on the slot machines, meanwhile the other odor did not.

Store and product perception

Another research that investigates the gender-based scents and its effects on approach-avoidance behavior in a retail store was done by Spangenberg et al. (2006). They conducted that gender-congruent ambient scent has a positive impact on the consumer's approach behavior as well as the store and merchandise evaluation.

Applying of ambient scent in the stores has showed effects on brand

recognition (Morrin & Ratneshwar 2003), product information and choice (Mitchell et al. 1995), evaluating of the store quality and its products (Chebat & Michon 2003), and consumer memory (Krishna 2012).

Ambient aromas can be compared with affective cues which determine the subsequent consumer evaluation of the products. This assumption is consistent with the observation that people's primary reaction to the scents is one of "like" or "dislike". Indeed, the most salient attribute of a scent seems to be its pleasantness or unpleasantness (Engen 1982).

Despite the numerous evidence that pleasant atmospheric odors enhance the approach to behavior, for example, increasing store spent time, the time for viewing advertisements (Knasko 1995) and the increased amount of money spent on gaming machines (Hirsch 1995) , little is known about how the surrounding flavors affect the evaluation of the product. Few studies have investigated the effect of ambient flavors on the evaluations of products, the environment or humans. In addition, these studies have produced mixed results (Bone &Ellen, 1999). The current study examines the effect of congruent and incongruent ambient scents on customer evaluation of the quality of the store and of the products.

2.2 GENDER

Ambient scent with gender-based products

Spangenberg et al., (2006) have researched evaluative and behavioral effects of congruity between perceived gender ambient scent and gender-based products. They investigated customers' responses to congruent versus incongruent scent between the gender-based goods and the perceived femininity or masculinity of ambient scent in a clothing store. The results confirmed that the presence of an ambient congruent scent with gender-based products influence shoppers to evaluate the store and its merchandise more favorable, and shoppers are more likely to exhibit approach behavior in comparison to an incongruent scent. These results were obtained when others store factors (price or advertising) were held constant. Moreover the presence of gender congruent scent increases the majority of approach behavior in an actual store including money spends. The results of the actual study extend prior research

(Spangenberg, Crowley and Henderson 1996) showing that beyond merely incorporating ambient scent it is important to managers to identify gender preferred or gender congruity scent in their store environments.

Gender based consumer behaviour

Spangenberg et al. (2006) study shows that a masculine ambient scent diffused in a men's clothing department improves consumers' evaluations and approach behaviour toward men's clothing as compared to the presence of a feminine ambient scent and vice-versa. But also, incongruent scents can drive to cognitive interference, because the information activated by the incongruent scent does not match with the product and the decision task. The current study shows that in certain cases, incongruent scents can have positive effects on consumer responses. Spence et al. (2014) already indicated that incongruent environments can lead to positive consumer responses in specific and unique places. This study in line with Spangenberg et al. (2006), research the effects of a gender-(in)congruent ambient scents in a men's and women's clothing store are studied.

Gender differences in shopping behaviour

Research shows that gender impacts consumers' shopping activity – how men and women perceive shopping. Namely, men see shopping as a task and want to finish it with a minimum of time and effort (Campbell, 1997; Meyers-Levy & Sternthal, 1991; Polegato & Zaichkowsky, 1994). And women behaviour is completely opposite, they see shopping as pastime, more than just a purchase, like an overall shopping experience (e.g. Cardoso and Pinto, 2010). Women compare to men are usually more involved consumers, they spend more time in shops, and they are looking for more information and more options than men (e.g. Cardoso and Pinto, 2010; Chang et al., 2004; Meyers-Levy & Sternthal, 1991; Mortimer & Weeks, 2011; Sommer et al., 1992).

There is a connection between gender and hedonistic (against utilitarian) shopping. Hedonic shopping refers to the emotional aspects of consumer behavior, while utilitarian shopping focus on its rational aspects (Arnold and Reynolds, 2012; Babin et al., 1994; Hirschman and Holbrook, 1982). According to the previous research

women are more hedonic oriented than men when shopping (Meyers-Levy & Sternthal, 1991; Polegato & Zaichkowsky, 1994).

In general, according to studies (Helgesen & Nettet, 2010; Meyers-Levy & Sternthal, 1991; Morrell & Jayawardhena, 2010; Noble et al., 2006; Polegato & Zaichkowsky, 1994) research suggests that women manifest higher shopping behaviour outcomes than men.

2.3 LOYALTY

Gender plays a very important role in loyalty marketing and exist a considerable difference in female and male behaviour. The notion of "loyalty" is defined by men and women in different ways, so women associate the concept of "loyalty" with words like "trust", "devotion", and "commitment" and men, in turn, define it as "honor" or "doing the right thing", and compare it to a contractual commitment. This leads us to the fact that women see loyalty as more of an emotional experience than men do.

We can observe even a larger gap between genders when we start comparing loyalty program engagement behaviors. While women like to take their time and compare their option, men are extremely focused and want to complete their purchases as little time as possible. Women also tend to value storytelling and personalization more than men, who are simply looking for quick solutions and easy-to-see value.

It can also be noted that men are typically more independent and tend towards programs that allow them to publicly show off their status, whereas women tend to identify more with groups and choose for more subtle demonstrations of elitism.

When we compare these characteristics, we see that they are very opposite. In addition to the fact that women and men are very different from each other, they also have different behavior during shopping and they are different in the loyalty (Burkard, 2018).

According to Hulten (2009) sensory marketing is a desire to provide and transmit a holistic experience and it is aimed at creating relationships with the client, creating loyalty. The loyalty derives from the fact that it focuses on post-production experience. This new wave of marketing is full of feelings and relies on various ways of

communicating messages, using an effective response to the information, brand management and communication. It suggests the consumption or use of a product or service as the most important point when a brand can influence a customer, creating a long-term relationship.

Regarding to the relation to return intentions, research shows that women are usually more loyal customers and are more likely to return in comparison to men (Helgesen & Nettet, 2010; Korgaonkar et al., 1985; Noble et al., 2006; Pan & Zinkhan, 2006; Patterson, 2007; Yavas & Babakus, 2009). That is means that women are more likely to remain loyal to the same shop (high return intentions), while men are more receptive to switching shops (low return intentions) (Powell & Ansic, 1997; Yavas & Babakus, 2009).

Table1: Table of references

Name of study	Content	Author, year
An integrative review of sensory marketing: Engaging the senses to affect perception, judgment and behavior	Sensory marketing model. The physiological onnection of smell and memory. Memory for scent itself. Scent and auto-biographical memories. Ambient scent and memory. Other consumer behavior research on smell. Visual perception. Grounded emotion Grounded cognition.	Krishna, 2011
Sensory Marketing And Consumer Buying Behavior	Sensory marketing. Sight. Smell. Hearing. Touching. Taste. Buying behavior.	Sayadi, M., Mobarakabadi, H., Hamidi, K., 2015
Smelling the books: The effect of chocolate scent on purchase-related behavior in a bookstore.	Scent had a positive effect on sales for both the thematic-congruent and incongruent products in comparison to the non-scented conditions.	Douc�e, L., Poels, K., Janssens, W., & De Backer, C. (2013)
Scents and sensibility: When do (in)congruent ambient scents influence product evaluations?.	Both congruent and incongruent ambient scents have positive effects on product evaluation, given that the incongruent scent is	Bosmans, A. (2006)

	not salient in the environment.	
Gender-congruent ambient scent influences on approach and avoidance behaviors in a retail store.	Masculine ambient scent diffused in a men's clothing department improves consumers' evaluations and approach behaviour toward men's clothing as compared to the presence of a feminine ambient scent and vice-versa.	Spangenberg, E. R., Sprott, D. E., Grohmann, B., & Tracy, D. L. (2006).
Gender (In)Congruent Ambient Scent - The Effect on Consumer Purchasing Behavior and Perceived Quality	Gender-congruent and incongruent ambient scent may affect consumer's purchasing behavior and quality perception. There were revealed different results depending on whether the stores were examined together, separately or on a gender level. The results indicate that there exist approach differences between the genders, which in return affect the consumer's purchasing behavior in different ways.	Fredriksson, A., Thuvander, L., 2015.
Are Women More Loyal Customers than Men? Gender Differences in Loyalty to Firms and Individual Service Providers.	The difference between male and female consumer loyalty may also impact where people shop depending on which format is more conducive to one-to-one relationships.	Melnyk, V., van Osselaer, S., M., J., and Bijmolt, T., H., A. (2009).

3. CONCEPTUAL FRAMEWORK AND HYPOTHESES

Based on the review of sensory marketing, scent congruency and gender differences in consumer behavior, this chapter presents the conceptual model and the hypothesis can be derived. The presented conceptual model is based on the academic review that revealed several gaps in the literature in line with the research purpose. It

is expected that the use of (in)congruent scents in clothes stores positively influences the consumer behavior.

The empirical study examines the impact of type of ambient scent (congruent versus incongruent) on attitudes towards actual purchases, product quality perception, store quality perception and consumer loyalty, the dependent variables. The independent variables are the type of store department (male part versus female part), as well as the gender (male versus female), all conceptually framed in the model presented below (Figure 3).

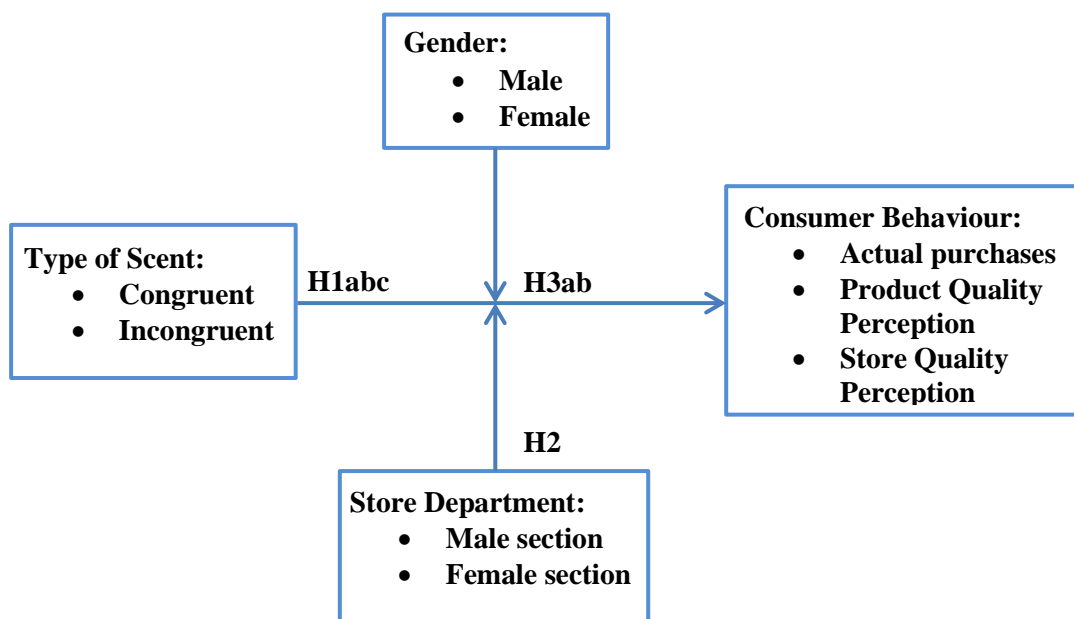


Figure 3: Conceptual Framework
Source: own contribution

HYPOTHESES

Existing studies found the significance of congruence between the ambient scent and the products. The study of Doucé et al. (2013) strengthen this idea by asserting that scent only has a positive effect when it is congruent with the product, even though the product itself does not originally have any inherent scent. However, Doucé et al. (2013) in their study where was used the chocolate ambient scent in a bookstore obtained the results that showed that chocolate scent had a positive influence and in comparison to the controlled conditions, the sales of the thematic-incongruent books was increased. So, the findings of Doucé et al. (2013) show that scent had a positive effect on sales for both the thematic-congruent and incongruent

books in comparison to the non-scented conditions. The idea of that incongruent ambient scent has a positive effect on consumer behaviour was supported by Bosmans (2006), who also confirms that both congruent and incongruent ambient scents have positive effects on product evaluation.

According to findings of (Douce et. all, 2016, p.277) gender incongruent scent also leads to a more positive evaluation of the customer value dimensions play, product excellence, and social as compared to a gender-congruent perfume. Play represents the pleasure the customers experience when shopping in the store; product excellence is the customers' evaluation of the quality of the clothes; and social value measures how much shopping in this store improves the customers' image. Taken the above into account, the following hypotheses are proposed:

H1: An incongruent ambient scent positively influences consumer behavior:

H1a: The higher the level of scent incongruence, the higher the likelihood of consumers' spending money on store purchases;

H1b: The higher the level of scent incongruence, the higher the perception of store quality;

H1c: The higher the level of scent incongruence, the higher the perception of product quality.

The results of previous studies show that women are usually more loyal customers and are more likely to return in comparison to men (Helgesen and Nasset, 2010; Korgaonkar et al., 1985; Ndubisi, 2006; Noble et al., 2006; Pan and Zinkhan, 2006; Patterson, 2007; Yavas and Babakus, 2009). Thereby women are more likely to remain loyal to the same shop, it means that they have high return intentions, when men are more receptive to switching shops, so they have low return intentions (Powell and Ansic, 1997; Yavas and Babakus, 2009).

Contrary to the common notion, female consumers did not always show stronger customer loyalty than male consumers. The author (Melnik et.al, 2009) suggest that the difference between male and female consumer loyalty may also impact where people shop depending on which format is more conducive to one-to-one relationships. For example, small, boutique, owner-operated stores may be more conducive relative to larger chain operations when targeting females than when

targeting males (the difference between male and female consumer loyalty may also impact where people shop depending on which format is more conducive to one-to-one relationships., 2009). Thus, we assume that the loyalty of men and women may differ in the corresponding female and male stores. Therefore, the second hypothesis is suggested:

H2: There will be significant gender differences on the loyalty observed between the corresponding male and female store departments.

A number of studies related to gender buying behaviour and congruence between the ambient scent and the products have been conducted. It was revealed that an ambient scent present in the environment, whether it is congruent or pleasant, provides a powerful mechanism, affecting consumer's perception of the retail store and merchandise, evokes behavior without consumers realizing (Ward et al., 2003; Doucé et al., 2013; Fedriksson & Thuvander, 2015; Bosmans, 2006; Spangenberg, 2006). However, in contradiction to this, the study of Schifferstein and Blok (2002) did not find any significant evidence that a congruent ambient scent would increase sales of products that do not emit a scent. In addition, another important finding from Doucé et al. (2013) was that females are more likely to approach behavior during congruent conditions. Fedriksson & Thuvander (2015) founded that male consumers are even more affected by the gender-incongruent ambient scent, leading to a noticeable increase of money in a store. All these significant findings give us the ground for the following hypotheses:

H3: The extent to which scent (in)congruence motivates consumers to spend money on the store will be moderated by both gender differences and the store department where he/she is experiencing the scent.

H3a: Women are more likely than men to engage in shopping experiences that are either congruent/ incongruent with the store department's scent.

H3b: The higher the scent incongruence, the higher the male motivation to purchase in the male department.

4. METHODOLOGY AND DATA COLLECTION

The main objective of this chapter is to present the research method used and to provide a detailed description of the variables used in the study to answer the stated research questions.

4.1 RESEARCH METHOD

The quantitative research approach has been used widely in previous studies using an experimental scheme to study this type of phenomena (Teller & Dennis 2011, Guéguen & Petr 2006, Jacob et al., 2014, Spangenberg et al., 1996, 2005, 2006). In this study, this approach was also used.

The experimental design well satisfies all our research questions since it shows a high level of internal validity that is very important for our research.

According to (Bryman & Bell, 2011) the advantage is that it allows us to manipulate and measure the effect between different groups.

In previous researchers (eg Spangenberg et al., 2006) the experiment was conducted using only two groups. The experiment of this study was conducted using four groups in two different sectors of the store: two groups for each odor where; first two groups has been exposed to a male ambient odor in male and female sectors and the second two groups have been exposed to a feminine odor aslo in male and female sectors.

Significantly, the experiment was conducted in a real environment that corresponds to a field experiment (Bryman & Bell 2011, Burns & Burns 2008). The technique that was used to collect empirical data depended on a pre-existing self-administered questionnaire, which is further discussed in the questionnaire design below.

In order to analyze the collected data and either approve or reject the developed hypotheses, we used the following statistical procedures, that were performed in the statistical program SPSS. To illustrate whether the environment with (in)congruent scent had any effects on consumers' behavior and quality perception, we utilized descriptive data together with MANOVA test(multivariate analysis of variance) and with the T-test. The t-test assesses whether the means of two groups

that are statistically different from each other. To ensure or minimize the risk of drawing false conclusions the significant level is to be at least 95% ($p < 0.05$), which is considered an acceptable level (Bryman & Bell 2011).

4.2 SAMPLING

When the probability of the perfect representation of a population are not considered we talk about area of nonprobability sampling techniques where there is a distinction between convenience and purposive sampling methods, such as quota or judgmental sampling (Kothari, 2004, p. 15). The main advantage of convenience sampling, compared to the other sampling techniques, is that data can be obtained cost-effectively and in a shorter period of time. Convenience sampling is an appropriate technique to be used since this study intended to address a specific theoretical research question about the effect of gender congruent incongruent ambient scent on male and female consumer purchasing behavior that are not yet generalizable to a certain population. In effect, this target audience was reached through the costumers of the store (Shop1one,Rossio) through direct communication with customers. This research includes several minors as participants therefore the consent was asked from parents or legal guardians to participate in the study. In the following, a detailed description of the research instruments and procedures will be presented alongside with the variables used in the research model.

4.3 RESEARCH INSTRUMENTS

Two main research instruments were used: a pretest and a main study using a pre-existing self-administered questionnaire. In the pretest the participants chose the smell, which in their opinion is associated as a masculine scent and as a feminine scent and in the main study participants were asked to fill the questionnaire. In order to reduce the social desirability bias, which is likely to occur when ethical intentions are at stake (Carrington et al., 2010), the survey was conducted anonymously. A detailed description of the procedures used is provided next, which include both the independent and dependent variables used to test the set of hypotheses proposed.

Pretests

The survey was pretested prior to launching the main survey to assure that all

questions were understood by the participants and whether the questionnaire is convenient and visually practical for filling. The pretest was attended by 15 respondents who wrote down all the incomprehensible moments and defects of the questionnaire that they discovered. All inaccuracies were collected, analyzed and corrected. The second pretest was to select the diffusers to be used in the male and female parts of the store. The participants needed to choose of two smells, one of which should be perceived as a typical male scent and the second as a typical female scent. For the selection of a female fragrance, three smells were presented Manzana Canela, Infantil and Vanilla, which are the top of sales for women's clothing stores. For men, there were provide 2 fragrances CKO and Affair that are also the top selling for men's clothing stores. In this pretest, 65 people took part, each of whom chose one male and one female flavor, respectively, with the task set. As a result of the pretest, a masculine fragrance Affair and a feminine fragrance Vanilla were chosen.

Main Study

A total of 152 responses were collected, of which only 120 were fully completed. High dropout rates are not uncommon for self-administered surveys, since participants can do not feel committed to answering all the questions in the survey. Yet, with 30 subjects participating in each cell of the four experimental conditions, thus, conforming to the number of observations needed for a randomized experimental-design study.

Questioning of participants, with prematurely installed diffusers was conducted in a Portuguese clothing store Shop1one. Shop1One is a Portuguese fashion brand. Shop1One was founded in 1993, when a national group with several years of experience in the area of import and export decided to create its own network of stores in Portugal. They position themselves as a dynamic and practical brand. Currently, with more than 20 years of existence, Shop1One has 30 stores spread from north to south of the country and with an Online Store. This brand was chosen because it exists on the market for a couple of decades, which means it is popular with the local population and also represents its tastes and preferences. Among the stores existing in Lisbon, the choice was stopped at the store, located on the Rossio. The explanation for this is that it is the center of the city and in this place there is a high

number of both local customers and tourists. The chronogram of the field experiment you can see in Appendix 4.

4.4 QUESTIONNAIRE DESIGN AND VARIABLE DESCRIPTION

For this study, we used the simplified questionnaire used in the study of Fredriksson and Thuvander (2015). The questionnaire was advantageous for our study due to a number of factors. It contains more closed questions that are easier and faster to answer, it is well structured, and this minimizes the risk of receiving unanswered questions or other errors, and the length of the questionnaire was considered sufficiently good to avoid the risk of fatigue of the respondent. Nevertheless the use of this technique has some limitations, since it can't ask the follow-up questions and collect additional information from the respondents. Though, it is considered to be the most advantageous option for this study (Bryman & Bell 2011).

Gulas and Bloch (1995) offer that the utilizing of the multi-item scales should be used whenever it is possible. There were conducted studies similar to this one that has relied on the same technique (e.g. Spangenberg et al. 1996, 2005, 2006, Chebat & Michon 2003, Jang & Namkung 2009, Doucé et al. 2013, Doucé & Janssens 2013). The questionnaire was divided into four parts, with three major sections using the semantic differential scale (Osgood et al. 1957) and Likert scale (Likert 1932). The first section of the questionnaire (Q1-Q2) used the semantic differential scale, which has two opposite adjectives on both sides of the scale (Kothari 2004, Brace 2008). The negatively charged adjectives were placed on the left side, and positive charged adjectives were placed on the right side of the questionnaire (see, Appendix 1, Appendix 2). The second part (Q3) of the questionnaire relied on the utilization of the Likert scale. The scale consists of a disagree-agree scale, which has been found successful in past research (Spangenberg et al. 2005, Doucé et al. 2013 cit. in Fredriksson and Thuvander (2015)).

However, there is a variation based on the interval that should be used between different researchers. The 1-4 scale (Spangenberg et al. 2005), 1-5 scale (Doucé et al. 2013) and 1-7 scale (Doucé & Janssens 2013) has been used in

investigations before. We decided to use the 7-point scale for both the semantic differential scale and Likert scales like it was done in the study of Fredriksson and Thuvander (2015). The number 4 in the 7-point scale represents the middle point in the semantic differential scale, where the answers are higher than four, are seen as a positive feeling, while the answers below four are viewed as a negative feeling.

A review of the various parts of the questionnaire reveals that to evaluate consumer quality perception of the store and of the products, the Q1 and Q2 were utilized. For evaluation consumer loyalty, there was used Q3. The final part of the questionnaire (Q4) deals with general information about the respondent, such as, gender, age and money spent in the store. In the end of the questionnaire, the respondents were given the opportunity to write a comment, this question was optional.

4.5 STIMULI DEVELOPMENT

The stimuli used in this study were the diffusers, which serve to create a more pleasant atmosphere in the store which will have impact on customers. As already have described above, through the pretest, 2 fragrances, female Vanilla and male Affair, were selected. Each of the fragrances has been used in the female and male parts of the store. The diffuser was attached to a specific part of the store, where the smell could be distributed well and evenly. When the diffuser with a smell Vanilla was used in the female part of the store, in this case it was considered congruent for the female department. When the diffuser with the smell of Affair was used in the female part of the store, in that case it was an incongruent smell. When the diffuser of Vanilla smell used in the male part of the store it was considered as incongruent smell and when there was used Affair smell in the male part of the store we considered it as a congruent.

5. ANALYSIS AND RESULTS

This chapter represents the carefully analyzed the data collected also it includes successful stimuli manipulation along with reliability and correlation

analyses on the measurement items.

5.1 SAMPLE CHARACTERIZATION

Firstly, there were conducted the descriptive statistical analyses to determine sample characteristics and validate the equality between the four experimental conditions in terms of demographic variables. The analyses present sample homogeneity that assures greater reliability of the results. The sample consisted of 120 considered responses, where 56 women (53.3%) and men (46.7%) participants. The majority of participants were between the age of 35 and 44 (33.33%), followed by participants aged between 25 and 34 (27.5%). Overall, age among participants ranged from less than 19 years to more than 65 years old. For visual representation of this information, please, see Appendix 3.

5.2 SCALE RELIABILITY

For the accurate results of this study it is important to test the scales' reliability. The Cronbach's α (alpha) is a widely used statistical measure for Likert-type scales to test the accuracy of scales. Cronbach's α is explained as measure of internal consistency for multiple question items that are interconnected. The value of this index ranges from a scale from 0.1 to 1, whereas higher values indicate high degrees of internal consistency as well as reliability of a sum or average of the survey items.

The Cronbach α , information is provided about whether all items measure the same latent variable and should be consequently combined into one scale. Under the most stringent premise, items being "parallel" are assuming to have similar variances and covariance (Bonett & Wright, 2015). The authors (While Bonett & Wright, 2015) propose rejecting the assumption of equal variances or covariance, researchers still did not agree to one universal minimum value for Cronbach α . Most commonly, an interval from 0.6-0.9 is referred to an acceptable value for research purposes. However, a value above 0.9 is assumed to indicate redundancy among scale items (Streiner, 2003).

In this study the Cronbach α was calculated for each multi-item scale that was intended to measure the same construct in order to strengthen the internal reliability of data.

Table 2: Reliability Test for Multi-Item Scales

Scale	Initial number of items	Cronbach's alpha
Loyalty	3	.845
Store quality	5	.914
Store product quality	4	.903

The results for internal consistency of all three scales showed an alpha value above the minimum acceptable value of 0.6. So for Loyalty Reliability Test for Multi-Item Scales it is 0.8, for Shop quality Reliability Test for Multi-Item Scales it is 0.9 and for Shop product quality Reliability Test for Multi-Item Scales it is also 0.9.

5.3 MAIN RESULTS

Having the variables of the model characterized and validated, as well as checked for a successful manipulation of both experimental conditions, we proceeded to test our set of hypotheses.

THE EFFECT OF INCONGRUENT SCENT

H1: An incongruent ambient scent positively influences consumer behavior:

H1a: The higher the level of scent incongruence, the higher the likelihood of consumers' spending money on store purchases;

H1b: The higher the level of scent incongruence, the higher the perception of store quality;

H1c: The higher the level of scent incongruence, the higher the perception of product quality.

In order to test our set of first hypothesis where we predicted that, as the level of scent incongruence increases, the higher will be consumers' willingness to spend money on store purchases and the higher the perceived store products and store quality. There was conducted a multivariate analysis of variance (MANOVA) to test an effect of three dependent variables. The expectations were realized and we got a statistically significant main effect of scent congruence condition on the actual purchases variable ($F(1,119) = 10.212, p < .01$). The congruent scent of the store Shop1one has an effect on consumer willingness to spend money in the store.

According to conducted t-test our results indicate that people are more willingness to pay with an incongruent scent ($M_{\text{congruent scent}} = 35.23$ vs. $M_{\text{incongruent scent}} = 24.53; t(118) = 2.512, p = 0.013$), H1a is fully supported (Table 2).

Table 3: Results Main Effect of Congruence Condition

Dependent Variable	Congruent		Incongruent		F test
	Mean	SD	Mean	SD	
Actual purchase	35.23	24.29	24.53	22.32	10.21

The results of MANOVA indicate no significant main effects on the perceived

store quality and product quality variables (all $F_s < .01$ $p's > .05$), so the hypotheses H1b and H1c are rejected.

Thus, our results partially confirm the first hypothesis. The results show that an incongruent ambient scent will affect the increase in actual purchases of consumers. But at the same time, the study showed that an incongruent ambient scent doesn't have impact on the perception of the store quality and perception of the product quality.

GENDER DIFFERENCE IN LOYALTY

H2: There will be significant gender differences in loyalty observed between the corresponding male and female store departments.

To test our second hypothesis where we predicted that gender differences in loyalty are expected to occur between corresponding male and female departments, we performed an ANOVA on the loyalty dependent variable. A significant two-way gender x store department interaction effect was found on the loyalty dependent variable ($F(1,119) = 5.551, p < .05$). Further t-test analysis was conducted.

Results indicate that there isn't gender difference between corresponding male and female departments ($M_{\text{male_male dept.}} = 4.95$ vs. $M_{\text{female_female dept.}} = 5.07$; $t(94) = 0.794, p = 0.42$). The difference between $M_{\text{male_male dept.}} = 4.95$ and $M_{\text{female_female dept.}} = 5.07$ is very small, it follows that the hypothesis H2 is rejected.

Based on the results above, we assert that there aren't significant gender differences in loyalty observed between the corresponding male and female store departments.

Table 4: Results Two-Way Interaction Gender x Store Department

	Men in male section		Women in Female section		
Dependent Variable	Mean	SD	Mean	SD	F test
Loyalty	4.95	0.81	5.07	.64	5.55

THE MODERATING EFFECT OF GENDER AND STORE DEPARTMENT

H3: The extent to which scent (in)congruence motivates consumers to spend money on the store will be moderated by both gender differences and the store department where he/she is experiencing the scent.

H3a: Women are more likely than men to engage in shopping experiences that are either congruent/ incongruent with the store department's scent.

H3b: The higher the scent incongruence, the higher the male motivation to purchase in the male department.

In order to test hypothesis three, a MANOVA was again performed on the actual purchases dependent variable. A significant three-way gender x scent congruence x store department interaction effect was found on actual purchases ($F(1.119) = 4.719, p < .05$), suggesting the potential moderating effect of both gender and store department.

To test hypotheses H3a and H3b, follow-up tests were then performed considering both the male and female sample separately. Regarding to H3a, results of a 2 (scent congruence) x 2 (store department) MANOVA indicate a significant two-way interaction once more on the actual purchases variable ($F(1,63) = 12.730, p = .001$).

The results indicate that indeed women show more flexibility in their shopping behavior. That is, they are likely to shop more on the female department that has a corresponding congruent scent ($M_{\text{congruent scent, female dept}} = 33.44$ vs. $M_{\text{congruent scent_male dept}} = 11.60; t(30) = 1.993, p = 0.05$), but also on a male department that has an incongruent scent ($M_{\text{incongruent scent_male dept}} = 55.00$ vs. $M_{\text{incongruent_scent female dept}} = 27.09; t(30) = 3.219, p < 0.1$), fully supporting H3a.

Men on the other hand show no purchasing differences between scent congruence and store department. That is, findings of the 2 (scent congruence) x 2 (store department) MANOVA indicate no significant two-way interaction effects on the actual purchases variable (all $F_s < .01$ p 's $> .05$), fully supporting hypothesis three.

Interestingly, scent incongruence seems to be a driver for men shopping in the male department. That is, further tests were conducted and t-test analysis shows that

indeed male participants purchased more on the male department with an incongruent than with a congruent scent $M_{\text{incongruent scent_male dept}} = 35.29$ vs. $M_{\text{congruent_scent male dept}} = 17.84$; $t(44) = 2.724$, $p < 0.1$, fully supporting H3b.

The conducted above analysis gives us an opportunity to summarize the following results. The gender differences and the type of the store department moderate the extent to which congruent versus incongruent scent motivates consumers to spend money on the store. There was found that women are more likely than men to engage in shopping experiences with female scent in both male sector and female sector of the store. Also there was found that men spend more money in a men sector of the store with a female scent. And these results confirm our assumptions stated above with earlier found results.

6. CONCLUSIONS AND IMPLICATIONS

The conclusion will answer the developed research questions along with highlighting the most interesting findings. In addition, the managerial implications, limitation of the study together with suggestions on future research will end this chapter.

Through this study, evidence has revealed that a gender-congruent and incongruent ambient scent may affect consumer's purchasing behavior and quality perception. The results from this study have revealed different results.

The first research question considered: What are the effects of a gender-congruent and incongruent ambient scent on consumer purchasing behavior in a Portuguese clothing store? The results indicate that the higher the level of scent incongruence, the higher the likelihood of consumers spending money on store purchases, so people are more willingness to pay with an incongruent scent.

Our findings reveal that males buying behavior increases when they are exposed to a gender-incongruent ambient scent.

The second research question examined: How does the gender-congruent and incongruent ambient scent affect consumer quality perception of a Portuguese clothing store? Through this study we indicate that there are no significant effects on

the perceived store quality and product quality variables. So, our results are different from result of Fredriksson and Thuvander (2015) which state that a gender-congruent and incongruent ambient scent affected male's quality perception of both the store and products and female's perception of product quality was positively affected during the gender-congruent and incongruent conditions, but the perception of store quality was only increased during the gender-incongruent condition. In our study we didn't find any effect on the consumer's purchasing behavior and quality perception by having a gender-congruent or incongruent ambient scent present in the store atmosphere.

Answering the third research question: How does the gender-congruent and incongruent ambient scent affect consumer purchasing behavior depending on the gender difference in a Portuguese clothing store? The results indicate that women show more flexibility in their shopping behavior. That is, they are likely to shop more on the female department that has a corresponding congruent scent but also on a male department that has an incongruent scent. Our findings are different from results of Fredriksson and Thuvander (2015), which conduct that males spent more money compared to the female groups.

6.1 PRACTICAL AND THEORETICAL IMPLICATIONS

The study has revealed that exist an opportunities among retailers to increase consumers' actual purchases by releasing a gender-congruent or incongruent ambient scent in the store atmosphere. It is important to have a strategy of what is to be accomplished, by using the ambient scent in the store environment, due to different scents evoking different responses. Based on our findings, if the objective is to increase sales in a masculine store, the manager should consider using a gender-incongruent ambient scent. Since the gender-congruent ambient scent increases female actual purchases, managers should account that fact and implement in strategic plan.

The found results are differ from the result of Fredriksson and Thuvander (2015) which state that a gender-congruent and incongruent ambient scent affected male's quality perception of both the store and products and female's perception of product quality was positively affected during the gender-congruent and incongruent conditions, but the perception of store quality was only increased during the gender-incongruent condition. Also our results haven't show the increase of money spent by male compared to the female groups. This suggests that further studies are important for the investigation of these reactions

6.2 LIMITATIONS AND FUTURE RESEARCH

Ambient scents can be used in a variety of practical settings. Retailers can use in-store scent diffusers, advertisers can use scented advertisements, package designers can use scented wrappings, and so forth. The results of this study suggest that as long as the ambient scent is incongruent with the product category, it will have a positive effect on consumers' buying behavior.

We have some differences in our results in comparison with the results of previous authors. This may be due to the limits that we consider necessary to notice. We refer to them the fact that our experiment was conducted with not so many participants, there was a time limit for carrying out the experiment, as well as the size

of the store. For future research, we propose to increase the number of respondents, according to this research can be carried out in stores of different sizes, as well as with different locations. It is also interesting to conduct an experiment in stores of other subjects, and not just clothes.

APPENDICES

APPENDIX 1: SURVEY QUESTIONNAIRE (English)

Survey No: _____

Part of the store _____

SHOP 1 ONE

Thank you for taking the time to complete this survey. There are no answers that are right or wrong. We are only interested in your opinions. If you have any questions about the investigation, please contact me (Zakharchenkott@gmail.com)

For each statement below, chose the number between 1 and 7 that you think is most consistent with your own opinion.

1. I think about Shop1One as a shop:

Q1.1 Low quality	1	2	3	4	5	6	7	High quality
Q1.2 Negative	1	2	3	4	5	6	7	Positive
Q1.3 Bad	1	2	3	4	5	6	7	Good
Q1.4 Unfavorable	1	2	3	4	5	6	7	Favorable
Q1.5 Unpleasant	1	2	3	4	5	6	7	Pleasant

2. I think the following about products of Shop1One:

Q2.1 Low quality	1	2	3	4	5	6	7	High quality
Q2.2 Negative	1	2	3	4	5	6	7	Positive
Q2.3 Bad	1	2	3	4	5	6	7	Good
Q2.4 Unfavorable	1	2	3	4	5	6	7	Favorable

3. For each of the following questions, please choose the number that best matches your opinion. How likely are you:

	Low probability			Neutral			Very probably
Q3.1 Return to this store in the future?	1	2	3	4	5	6	7
Q3.2 Will you buy something from this store in the future?	1	2	3	4	5	6	7
Q3.3 Would you recommend this store to a friend?	1	2	3	4	5	6	7

4. Other questions

Gender:

Male

Female

Year of birth _____

How much did you spend today in Shop1One? _____ €

APPENDIX 2: SURVEY QUESTIONNAIRE (Portugues)

Survey No: _____

Parte da loja _____

SHOP 1 ONE

Obrigado por dedicar o seu tempo para concluir esta pesquisa. Não há respostas certas ou erradas. Estamos interessados apenas na sua opinião. Se tiver alguma dúvida sobre a investigação entre em contato comigo (Zakharchenkott@gmail.com)

Para cada declaração abaixo escolha um número entre 1 e 7 que considere mais consistente com sua opinião.

1. O que penso sobre a Shop1One como uma loja:

Baixa qualidade	1	2	3	4	5	6	7	Alta qualidade
Negativo	1	2	3	4	5	6	7	Positivo
Mau	1	2	3	4	5	6	7	Bom
Desfavoravel	1	2	3	4	5	6	7	Favoravel
Desagradável	1	2	3	4	5	6	7	Agradável

2. O que penso sobre os produtos da loja Shop1One:

Baixa qualidade	1	2	3	4	5	6	7	Alta qualidade
Negativo	1	2	3	4	5	6	7	Positivo
Mau	1	2	3	4	5	6	7	Bom
Desfavorável	1	2	3	4	5	6	7	Favorável

3. Por cada uma das seguintes questões, coloca o número que faz correspondência na sua opinião:

	Pouco provavel			Neutro			Muito provavel
Voltarei à loja no futuro?	1	2	3	4	5	6	7
Irei comprar algo na loja no futuro?	1	2	3	4	5	6	7
Recomendarei a loja a uma amigo?	1	2	3	4	5	6	7

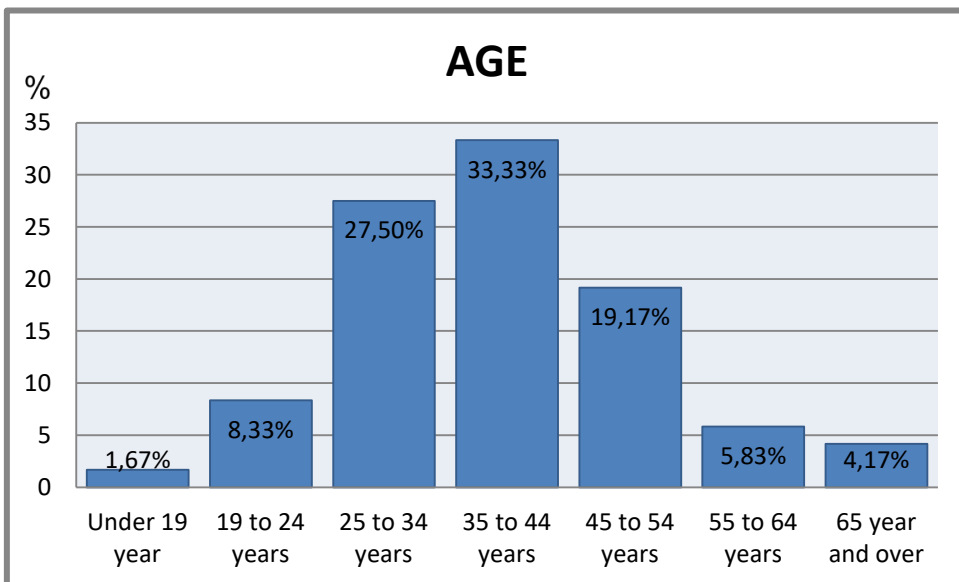
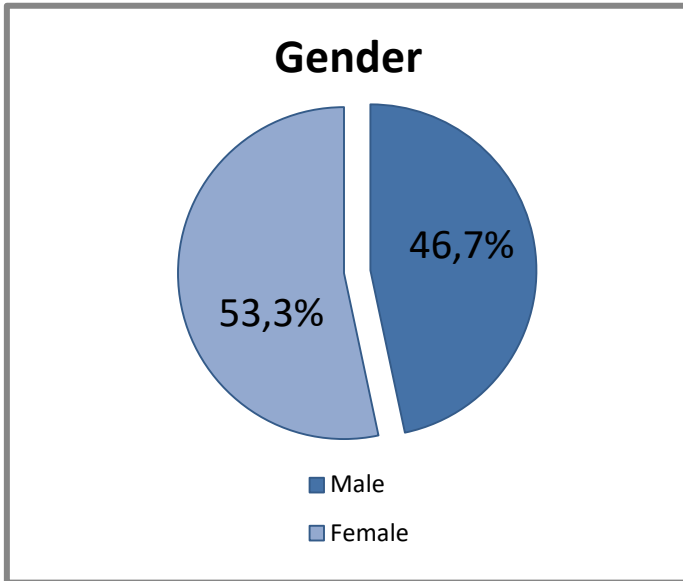
4. Outras questões

Sexo: Masculino Feminino

Ano de nascimento _____

Quanto gastou hoje na Shop1One? _____ €

APPENDIX 3: SAMPLE CHARACTERISTICS



APPENDIX 4: SCHEDULE OF EXPERIMENT DATA COLLECTION IN SHOP1ONE ROSSIO

Store	Condition	Date/ Time	Store	Condition	Date/ Time
Shop1one Rossio (women section)	Congruent scent	2018-04-27/ 12.30-19.00 (6.5h)	Shop1one Rossio (men section)	Congruent scent	2018-04-30/ 12.30-19.00 (6.5h)
		2018-05-01/ 12.30-19.00 (6.5h)			2018-05-02/ 12.30-19.00 (6.5h)
		2018-05-13/ 12.30-19.00 (6.5h)			2018-05-10/ 12.30-19.00 (6.5h)
	Incongruent scent	2018-04-28/ 12.30-19.00 (6.5h)		Incongruent scent	2018-04-29/ 12.30-19.00 (6.5h)
		2018-05-03/ 12.30-19.00 (6.5h)			2018-05-04/ 12.30-19.00 (6.5h)
		2018-05-07/ 12.30-19.00 (6.5h)			2018-05-08/ 12.30-19.00 (6.5h)

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