

Role of Scented Ambience in Shaping Consumer Behaviour

Sinmoy Goswami

Assistant Professor, Assam Institute of Management
Guwahati-781035, Assam, India
Email Id: sinmoy.goswami@gmail.com

Dipankar Malakar

Assistant Professor, Department of Commerce
K. K. Handiqui State Open University
Email Id: dpmalakar1984@gmail.com
(Corresponding Author)

Shazeed Ahmed

Assistant Professor, Assam Institute of Management
Guwahati-781035, Assam, India
Email Id: shazeedahmd@gmail.com

Abstract: The paper aims to identify the important determinants of scented ambience that helps consumers in the formation of positive feeling towards their shopping experience in a retail store. It further tried to find out if there was any preference for specific scents among consumers in a retail environment. This article has contributed to the preliminary investigations on identify the important determinants of scented ambience that helps consumers in the formation of positive feeling towards their shopping experience in a retail store. The study involved collection of relevant data through a survey of 547 respondent consumers. The study found that scented ambience in a retail outlet enhances the overall shopping experience of consumers by making it enjoyable and more exciting. The study found that scented ambience in a retail outlet enhances overall shopping experience of consumers by making it enjoyable and more exciting. Such scented ambience makes time spent in queuing line exciting, shopping interesting, and queuing for help enjoyable. Further, it was found that lavender fragrance was most preferred among consumers in a retail environment. The current research will add value to the existing marketing research. Further, it will assist managers in creating a more interesting and scented ambience.

Keywords: Ambience, Fragrance, Determinants, Olfactory and Word of Mouth

Introduction

A prime issue that retailer's face today is in knowing the role of physical evidence on consumer's perception, and his or her resultant purchase behavior regarding goods and services. This is evident from the research works and findings on retail physical environment of eminent researchers (Baker, Parasuraman and Grewal, 1994; Bitner, 1992; Bellizi, Crowley and Hasty, 1983). The ambience of a retailer's shop is of immense importance as it helps in attracting

consumer's attention (Mehrabian and Russell, 1974). It ensures reach and loyalty of consumers. It also ensures a more focused strategic plan. Any unit of input to any of the senses of human body is known as stimuli. By nature the various organs in the human body like ears, eyes, nose, tongue and skin are the receptors that receive sensory inputs. These sensory receptors enable human beings to hear, see, smell, taste and feel (Mehrabian and Russell, 1974). According to Zaltman (2003) and Vlahos (2007), as a person smells something, there is an immediate instinctive reaction in the odour receptors. Whenever a person is exposed to any form of scent, his/her odour receptors starts responding before initiation of thinking process in his/her brain (Vlahos 2007). The human body is believed to have between 6 to 10 million receptor cells with the latest research putting this figure at 10 to 20 million receptors (Stangor and Walinga, 2014). They are placed in the olfactory epithelium. These cells enable the human brain to recognise different aromas which may be to the tune of two thousand to four thousand in figure (Strugnell and Jones, 1999). According to the Economist, (1998), there are 1000 varied protein related to receptors and each has the capacity to sense a minute number of varied molecules bearing scent. According to the research finding of McPherson and Moran (1994), there is a corresponding receptor site for each smell molecule. Also, all the receptors function either in isolation or in combination (McPherson and Moran, 1994). These ultimately assist in the final evaluation and use of products meant for consumption. Marketers in their quest to find novel ways to differentiate their brands are increasingly appealing consumers through attractive scents. With scented ambience in a retail environment, marketers try to evoke specific moods and emotions of consumers which are presumed to ultimately entice them (Bone and Ellen, 1999). Retailers have a perception that a scented ambience if created rightly can positively affect the behavior of consumers (Merrilees and Miller, 2001). Numerous researches have established that consumer's emotions and thought processes are controlled by odours (Hirsch, 1995).

Consequently, marketers are gradually accepting the fact that sense of smell can be an influential motivator for sales of their products and (or) services (Wilkie, 1995). India has been ranked presently as the fifth-largest global destination with respect to retail space. According to IBEF (Indian Brand Equity Foundation) (2019), in India the retail industry has emerged as a very vibrant and emerging industry due to the arrival of many new players. It has been revealed that, contribution from the retail industry is to the tune of over ten per cent of the GDP (Gross Domestic Product) of the country and around 8 percent towards employment in the industry. Further, the retail industry in India is estimated to be raised at a lesser pace of 9 per cent over 2019-2030, from US\$ 779 billion in the year 2019 to US\$ 1,407 billion by 2026 (IBEF, 2021). The study also stated that the aforesaid industry is likely to grow to a level which is above US\$ 1.8 trillion by the year 2030.

According to Insights Success (2020), the Indian economy faces several challenges in the retail front. The new generation consumers are equipped with more income, credit cards, the urge to elevate their standard of living and the desire to maintain a sophisticated shopping culture. Mushrooming growth of organized retail outlets and mega stores are catering to this newly sought need of these consumers. At the same time, the growing number of young shoppers with their own source of income, rapid urbanization, emergence of finance companies and the entry of international retailers are making the market more competitive. This has led to more challenges than ever before in the Indian retail industry.

Conceptual Framework

In the field of consumer behavior, several models on the role of scented ambience were developed by scholars that have paved a significant way towards further research. Some of the prominent models that have made an impact on the study are discussed below. The *Scent-Emotion Model* delves on how scents induce the emotions of consumers and thus consequently have a profound impact on consumer behavior (Spangenberg et al., 2006). The *Attention*

Restoration Theory gives an idea on how scents can be instrumental in bringing back to focus the noticeable resources and enhances the engagement of consumers (Kaplan, 1995). The *Mood-Consumer Behavior Model* successfully creates an association of scents with the moods of consumers which consequently influences consumer behavior (Gardner, 1985).

Literature Review

Several prominent research works have reviewed the role of scented ambience in influencing consumer behavior and use of specific scents in any retail environment. These studies have been considered as they have found a place in scholarly journals of repute and have made an impact on the identified field of study. A snapshot of the literature reviewed is discussed in chronological order starting with the latest ones as explained below. Murwani, Rooseno, Cakramihardja and Widjaja (2023) tried to understand the role sensory marketing in shaping the online behavior of perfume users. Results highlighted the considerable influence of sensory marketing on sensory perception. The research applied sensorial cues, sensorial elements, and individual variations as part of the methodology used. Gao, Wang, Huang and Guo (2022) in a study, combined urban smell tracking experiments with internet social media data analysis to categorize smells. The study revealed that olfactory sensitivity and smell background has an encouraging effect on landscape layout outlook and urban planning. It also helps in the development and design optimization of distinctive urban memory. Herz, Larsson, Trujillo, Casola, Ahmed, Lipe and Brashear (2022) in their study examined the capability of smell to support in the progress and communication of retail brand image. The study highlighted the role of fresh ambient aromas in successfully creating a unique image of distinction in the marketing mix of retailer.

Berèik, Neomániová, Mravcová, and Gálová (2021) in their research work delved on the significance of consumer neuroscience and technologies used to manipulate customers and gain from the aromatization of business spaces.

The study found positive effects of aromatization in the spaces that are aromatized, however their utility is still not garnered optimally. Flavián, Sánchez and Orús (2021) through their research examined the role of ambient scent in a tourism service provider environment. The study confirmed the role of satisfying and harmonious ambient scents which is instrumental in augmenting the sensory stimulation and the consequent emotional and behavioral reactions. Goldberg and Niekerk (2021) in an effort to elucidate the lead drivers of consumer preference, delved on the role of scent in household products with an innovative three-factor framework. The findings reveal that scented household products have a affirmative impact on consumers in their purchase behavior. Vega-Gómez, Miranda-Gonzalez, Pérez Mayo, González-López and Pascual-Nebreda (2020) in their paper tried to study the role of smell on the assessment and performance of the consumer of nonprofit services. The findings of the study revealed the significant influence of scent in a positive way on sensitivity and assessment of consumers, as well as on the objective to revisit the institution. Sliburyte and Vaitieke (2019) in their research paper examined the role of smell as a part of sensory marketing in business decisions. The study found that scent is a distinctive means for communicating information. Scent is also a unique tool to entice consumers and in shaping consumer behavior. The study further found that scent not only create a brand, but also help in creating a unique atmosphere that instigates consumers towards impulsive buying. Chiguvu (2017) examined the role of ambience on satisfaction of consumers at Debonairs Pizza outlets with reference to elements like colour, scent, temperature, layout, lighting and decor. The study found that store ambience elements like scent, lighting and temperature have a significant impact on satisfaction of consumers. However, the study could not establish significant relationship between store design and satisfaction of consumers. Gowrishankar (2017) in his study opined that store ambience plays a pivotal role in making the shopping experience of consumers' more fulfilling. The study found

aroma and store lighting to be the most significant factors of store ambience that motivates consumers to purchase. The study also found that factors like temperature, music, cleanliness, layout and store displays are instrumental in retaining consumers. These findings confirmed the earlier works of Hussain and Ali (2015) and Spence, Puccinelli, Grewal and Roggeveen (2014). Danziger (2017) noted that Starbucks greet the alteration of season with novel drinks of varied flavours to entice consumers. Starbucks offers hand blended coffee with signature flavours of pumpkin spice that evokes strong emotions and memories. Seasonally, it uses fragrance of frozen frappuccinos and peppermint mocha to arouse positive feelings. Similarly, Lincoln Motor Cars uses custom signature scents of fresh, floral, woody or amber fragrance in their showroom ambience to market their new models (Danziger, 2017). This is keeping in view of the fact that pleasant fragrance entices consumers to hang around for a longer duration and thereby increasing sales in the stores.

Randhir and Latasha (2016) in their study tried to examine the role of marketing at the sensory level of consumers by conducting a case study of KFC retail outlets. The study found that among the five senses of consumers that stimulates human action, two sense organs namely ear and nose are more receptive to stimuli. The same study also found that music is instrumental in making the consumers' experience relaxing and smell to be very stimulating. Lund (2015) delved on the history of sensory marketing research and theory. He explored the role of sensory appeal in a retail environment with emphasis on fashion retail environment. It was an exploratory literature review based on a broad variety of sensory stimuli like taste, sight, smell, hearing and touch that targets the product, its packaging and the retail environment at large. This study gave an idea about the multiple levels of issues to be considered to maintain an attractive and convincing sense regarding any brand in a retail environment. Desjardins (2014) stated that retailers who compete with small and crowded spaces can avert the feelings of claustrophobia

through the application of space-enhancing scents. Such small and crowded spaces may due to limited size of the store or the volume of merchandise they stock. On the other hand, retailers who want to maintain the trend of a minimalist are recommended to use scents in the ambience that has the capacity to infuse a sense of contentment in the retail environment (Desjardins, 2014). Banat and Wandebori (2012) conducted a study to know the role of design and atmosphere of stores on sales to consumer. The study found that existence or non-existence of scent has a significant impact on the intension to purchase by consumers in the retail chain outlets. The study further found that pleasing fragrance from scent has an impact on the disposition and feeling of consumers that instigates them to spent more time and experience the feeling of excitement. This work confirmed the earlier works of Knasko (1989).

Zameer and Mukherjee (2011) carried out a study on the behavior of urban consumers on their patronage of food and grocery retail format. The study was conducted on both kirana stores and modern retail outlets. The study found that in the endorsement of kirana stores, important factors like location, customized services, and easy goods return policy motivate consumers to purchase. On the other hand, in the endorsement of modern retail formats, factors like choice of the product, proper store management, and value added services motivate consumers to purchase. Devgan and Kaur (2010) carried out a research work on the important factors that affect the perception of consumers on shopping malls in India. They found that consumers lay stress on various factors like scope of accruing value for money on products purchased, comfort and enjoyment while shopping at malls. The study further observed that besides consumers enjoying shopping experience during shopping, other elements like layout cum ambience of the shopping malls are also important. Bell and Bell (2007) in their study elaborated on the concept of sensory branding and sense of smell. The study found that smells directly connect with the human brain and so responses to smells are

reflexive. It found that many retailers use marketing stimuli like scent to induce feeling of comfort among consumers in their stores. These ultimately create a positive mood leading towards purchase. Tisdale (2007) in a study presented an overview of the importance of sense of smell to humans. The study took recourse to the work of Herz (1998) and found that among all the senses of sensory systems, smell by nature gets immediately associated with emotions. This is due to the fact that human smell and emotions are activated in the same part of human brain. The study further established that smell besides having the capacity to unlock memories, also stimulates changes in breathing, heartbeat, mood and behavior. These findings confirmed the earlier works of Brown (2005), and Morrin and Ratneshwar (2000).

Vlahos (2007) tried to study the function of scent on the ambience of a retail setting and how it affects the human attention and memory. The study revealed that smell has the strongest sense in the human memory. The findings suggest that human beings can remember the sense of smell hundred times more in comparison to other senses like sound, sight or things that are felt. In a normal human being, smell comprises around 75 percent of the total emotions generated (Bell and Bell, 2007). As a resultant effect, smell signifies a direct link with the perception of happiness and hunger. In fact, it is a sensory bandwidth which does not get easily turned off (Vlahos, 2007; Wilkie, 1995). Spangenberg, Sprotta, Grohmann and Tracy (2006) in their study tried to delve on a retail environment with emphasis on scented ambience. The study found that scent has the ability to manipulate consumers in terms of perceptions towards the store, its nature of wares and sales of the retail outlet. The study also found that, through support of a stimulus–organism–response formula, the internal consumer behaves differently in an environment mediated by the effects of scented ambience. The study confirmed the earlier work of Lantos and Podoshen (2005). The latter scholars also found that consumers respond exceptionally well to food-based fragrances such

as fresh baked chocolate chip cookies or apples and cinnamon. Zoladz and Raudenbush (2005) tried to explore the role played by scented ambience among consumers. The study found visible improvement in the scores of participants on aspects related to virtual identification memory, intentional processes, visual-motor reaction pace, and working memory through peppermint and cinnamon scents in the ambience. Moreover, the study found that among the participants, the ratings on level of vigour and mood was found to be higher. Further, it lowered the level of fatigue in an ambience that was scented with peppermint odours. Mombaerts (2004) carried out a study on the receptors of odourant and on how the olfactory system is organized. The study provided substantial support in confirming the combinatorial model for odour coding with the help of which multiple receptors can be activated by an odourant and multiple odourants can activate a receptor. The study also found out the outcome of second-order neurons to the olfactory cortex from the olfactory bulb. The study adds clarity as to how molecular biology can shed light on aspects of sensory information processing in the brain. Davies, Kooijman and Ward (2003) in their study concentrated on the use of scented ambience in a retail setting and researched on the important stimulating factors that lead to arousal of emotional and behavioral reaction of consumers. The study was on the research work of Mehrabian and Russell (1974). It also tried to add up to the research findings in the model of Gulas and Bloch (1995) to embrace existing research on human olfaction. Davies et al. (2003) further observed the role of smell to convey a ‘feeling of ideal place’ and its novel capacity to make a distinction in a marketplace. Adams (1998) in his research work tried to study the trends among the retailers regarding the use of scents in an environment of retail business. The study found that acts such as in-store displays by using scent-dispensing kiosks for providing scent around the surrounding air and planned distribution systems for in-store odours by the use of ambient chocolate odour during Mothers’ Day promotions can positively influence consumers. These are vivid instances of the use

of scents to entice consumers by retailers (Adams, 1998).

Hunter (1995) conducted a study in an environment of in-house bakeries in supermarkets. He found that scents can be used to fill the air around food stores and other places to lure buyers and consequently boost sales. Similar studies conducted by Hirsch (1991) found that sale of bakery items in shops with scented ambience have increased by a whopping 300 percent. Hirsch (1995) in his study also revealed that a satisfying ambient scent in a gaming zone led to increase in revenue by 45 percent. There are positive effects for the presence of scent and music on consumers' shopping behavior (Mattila and Wirtz 2001; Spangenberg, Grohmann and Sprott 2005). Research work carried out by Hirsch and Gay (1991) revealed that scents increase the desirability of Nike athletic shoes. Additionally, Hirsch (1990) found that eighty-four percent of people were more likely to buy Nike shoes, if they were kept in a room with a scented ambience. Another study by Lindstrom and Kotler (2005) found that respondents were eager to pay ten to fifteen percent more for any product purchased in a scented ambience. Keefe (2017a) found that citrus fragrance can be enriching in a casino and a stimulating scent (like that of peppermint) can help in keeping consumers attentive. It was also revealed that shoppers at supermarket spend more when there is aroma of fresh fruit like melon in the air, particularly in the food court and checkout areas (Keefe, 2016). Further, it was found that the cosmetic giant Nivea, diffused its branded Sun fragrance in the midst of one of its advertising campaign among movie viewers which resulted in recall of the same advertisement by 37 percent of the moviegoers (Keefe, 2017b). Additionally, it was found that Australian UBET retail outlets used the scents of fresh cut grass for consumers to smell the joy of spring racing celebration (Keefe, 2015).

Minsky, Fahey and Fabrigas (2018) in their article, mentioned about Hyatt Place using signature scent as brand standard to diffuse a message of welcoming grace and calmness for employees and consumers. The scents include fresh blueberries

and light floral on a base of warm vanilla and musk that has the proven power to enhance brand personality and experience. Further, companies like J. Walter Thompson and Nelson Plant Food uses signature floral scent branding to increase use of its products and create emotional triggers (Minsky et al., 2018). Similarly, the theme behind 1 Hotels using signature scent is to convey the message of luxury, simplicity, transparency and ease by using bouquet of earthy moss, herbal greens and sultry woods. Douce, Poels, Janssens and De Backer (2013) in their research work tried to know the result of chocolate scent on behavior related to purchases in bookstores. They found that the scent of chocolate in a high-street chain bookshop has the capacity to persuade consumers to explore for more books. The same study further found that specific perfumed ambience influences specific goals in the mind of consumers.

Need for the Study

The above literature review included a mixture of the general role of scented ambience of retail outlets in shaping consumer buying behavior. Also, the above discussed literature also illustrated how different forms of retail stores used scents to entice consumers. But, the aforementioned studies are devoid of exhaustive information on the important determinants of scented ambience in shaping consumers' buying behavior. The above studies further lack sufficient information on the specific scents that are used in retail outlets to entice consumers. In short, though the use of scents to create a professionally build up ambience has become popular among marketers, academic research that captures the determinants of olfactory effects is quite rare. These represent significant gaps regarding available research work regarding scented ambience in retail outlets and consumer behavior. Therefore, this study tried to find out the role played by scents in a retail environment in terms of how it affects the ambience of a retail environment and consequent consumers' overt behavior. Further, this study also tries to find out if there is any preference for specific fragrance among the consumers. This is essential to ensure

that marketers can use the specific fragrance to entice consumers towards the retail environment and make their shopping experience more fruitful and enjoyable.

Objectives of The Study

The research was carried out with the twin objectives i.e.;

- i) To study the important determinants of scented ambience that significantly affects the purchase behavior of consumers in a retail outlet.
- ii) To study the existence of any specific preference for fragrance of scents that entices consumers towards a retail outlet.

Hypothesis

Based on the above second objective of this study, the following hypothesis has been formulated.

H: There exists specific preference for fragrance of scents that entices consumers towards a retail outlet.

In order to test this hypothesis, the following sub-hypothesis was formulated.

H_A : There are significant differences among the means of the influence of scented ambience prevailing in a retail outlet on the overall shopping experience of respondent consumers with respect to their preference for each of lavender, jasmine, rose, orchid, sandal, musk, citrus, vanilla and amber fragrances.

For testing sub-hypothesis H_A , the following null and alternate sub-hypotheses ($(H_A)_0$ and $(H_A)_1$, respectively) were formulated.

$(H_A)_0$: There are no significant differences among the means of the influence of scented ambience prevailing in a retail outlet on the overall shopping experience of respondent consumers with respect to their preference for each of the aforementioned nine (9) fragrances.

$(H_A)_1$: There are significant differences among the means of the influence of scented ambience prevailing in a retail outlet on the overall shopping experience of respondent consumers with respect to their preference for each of the aforementioned nine (9) fragrances.

Methodology

The study was conducted in the city of Guwahati which is considered as the gateway of North East India. It was basically exploratory and descriptive research in nature. For the determination of sample size, both qualitative and quantitative approaches have been used. Though the *minimum sample size for behavioral studies* (and based upon affordability) is 200 (Malhotra and Dash, 2016; Sudman, 1976), a sample size of 547 respondents was involved so as to make the study more comprehensive. The aforementioned respondents were selected through quota sampling. The respondents were walking consumers (of both fast moving consumer goods (FMCG) and consumer durables) of few prominent retail outlets within Guwahati city. The selected retail outlets with their respondent sample size were Vishal Mega Mart– 46 consumers, Pantaloon Retail– 46 consumers, Big Bazaar– 46 consumers, Brand Factory– 46 consumers, Reliance Trends– 46 consumers, Metro Bazar– 46 consumers, Guwahati Bazar– 46 consumers, Hub – 45 consumers, India Bazar – 45 consumers, Sohum Shoppe – 45 consumers, Shoppers Point – 45 consumers, and Central Mall – 45 consumers.

The questionnaire used was self-designed. For fulfilling the first objective, initially a total of 33 attitudinal statements (related to probable determinants of scented ambience) were used. The statements were developed by taking inputs from research experts through focus group interview and information gathered through review of secondary sources like magazines, blogs and personal insights. The 33 attitudinal statements were administered on a sample of 200 respondents using 5-point rating scales. To ensure construct validity, the initial data collected

were processed by Exploratory Factor Analysis (EFA) that comprised of Principal Component Analysis along with Varimax Rotation. This was because in case of Principal Component Analysis, the total variance in the data is considered (Hair, Black, Babin, Anderson and Tatham, 2009; Malhotra and Dash, 2019). Also, Varimax Rotation was employed as it significantly enhances interpretability of the factors (Hair et al., 2009; Malhotra and Dash, 2019). In this manner, for the first objective, a total of ten attitudinal statements related to the important determinants of scented ambience were identified. The results of this process have been explained in detail in the section, results and analysis. Consumers indicated their level of agreement or disagreement on each statement posed in a 5-point rating scale (where *strongly agree* is denoted by 5, *agree* is denoted by 4, *neither agree nor disagree* is denoted by 3, *least agree* is denoted by 2 and *do not agree* is denoted by 1). For ensuring robustness of the results of the aforementioned EFA, a Confirmatory Factor Analysis (CFA) was administered with the above mentioned 33 attitudinal statements (related to probable determinants of scented ambience). This CFA was carried out involving another independent sample of 200 respondents using the same 5-point rating scales.

In order to fulfil the second objective, specific fragrances were selected based upon initial focus group study with representatives from the Housekeeping Department of 7 selected retail outlets as well as from the literature reviewed. Consequently, a total of 9 fragrances were considered. These included lavender, jasmine, rose, orchid, sandal, musk, citrus, vanilla and amber. The respondents were also asked to indicate their perceived ratings on the degree of preference of specific fragrance(s) among the various fragrances of scents available for retail market environments. The respondents indicated their degree of preference for the specific flavour through appropriate ratings in a 5-point scale where 5 denoted *highly like*, 4 denoted *like*, 3 denoted *neither like nor dislike*, 2 denoted *dislike*, and 1 denoted *strongly dislike*. Besides,

the respondents were also asked to indicate their perception regarding the influence of scented ambience prevailing in a retail outlet on the overall shopping experience of respondent consumers. This was done through an attitude measurement statement, "*the overall shopping experience is influenced by a scented ambience prevailing in a retail outlet*". Respondent consumers were asked to rate their degree of agreement or disagreement in terms of this statement in a 5-point rating scale. Here, *strongly agree* was denoted by 5, *agree* was denoted by 4, *neither agree nor disagree* was denoted by 3, *least agree* was denoted by 2, and *do not agree* was denoted by 1. Thereafter, the existence of any specific preference for fragrance of scents that entice respondent consumers towards the retail outlet was attempted to be examined using One-way Analysis of Variance (ANOVA) at a significance level, $\alpha = 5\%$ (0.05). Here, level of respondents' preference for each of aforesaid nine (9) fragrances was taken as the *independent variable*. Again, the influence of scented ambience prevailing in a retail outlet on the overall shopping experience of respondent consumers was assumed to be the *dependent variable*. One-way ANOVA was administered to observe the existence of major differences amongst the above dependent variable means with respect to different levels of the mentioned independent variable (sub-hypothesis H_A) (Aaker, Kumar, Leone and Day, 2016; Chawla and Sondhi, 2011; Cooper, Schindler and Sharma, 2019; Malhotra and Dash, 2019). Initially, One-way ANOVA was administered to recognize available flavour(s) of scent from the aforesaid nine (9) flavours, for which the abovementioned means varied in a major way in terms of various levels of respondents' preference for each of such flavour(s) of scent (i.e. independent variable) (p -value less than $\alpha = 0.05$ (5 percent)). Based on descriptive statistics, an effort was made to uncover the above mean values (pertaining to the recognized flavour(s) of scent) which were highest in contrast to the other means and the parallel degree of choice for such flavour(s) of scent. The latter identified flavour(s) of scent require higher attention from

marketers of such scents in order to formulate appropriate marketing strategies to increase their sales.

Analysis and Results

It was noticed that most respondent consumers exhibited “high preference” for lavender, orchid,

sandal, musk, vanilla and amber scented fragrance with respect to scented ambience prevailing in a retail outlet. This is indicated in Table A-1. Also, it was found that most respondents stated that there was “high influence” of scented ambience prevailing in a retail outlet on overall shopping experience (refer to table A-2).

Table A 1: Respondents’ Levels of Preference for Various Available Flavours of Fragrance

Sr. No.	Available Flavours of Scent	Levels of Preference					Total	Total
		High Preference	Preference	Non Preference	High Non Preference	Total		
1	Lavender	330	192	3	0	525	22	547
2	Jasmine	87	134	99	6	326	221	547
3	Rose	61	326	62	31	480	67	547
4	Orchid	449	78	5	6	538	9	547
5	Sandal	292	142	11	0	445	102	547
6	Musk	281	141	36	3	461	86	547
7	Citrus	64	347	56	17	484	63	547
8	Vanilla	308	135	35	14	492	55	547
9	Amber	347	138	18	11	514	33	547

Table A-2: Respondents Opinion regarding Influence of scented ambience prevailing in a retail outlet on overall shopping experience

Sr. No.	Respondents Opinion	No. of Respondents
1	High Influence present	456
2	Influence present	88
3	No Influence present	0
4	Totally no Influence present	0
	Total	544
	Neutral	3
	Total	547

As noted in the section, METHODOLOGY, Exploratory Factor Analysis (EFA) was carried out on 33 attitudinal statements administered on a sample of 200 respondents using 5-point rating scales. From the results, a total of 10 factors (or statements) having Eigen value of 1 or more than 1 were derived. Consequently, the 33 original statements were reduced to 10 statements. Cronbach’s alpha administered on to the determinants of scented ambience indicated reliability score of the scale to be 0.89 (refer to Table 1). This score was greater than 0.70 (Nunnally, 1978). Hence, the reliability of the ‘*determinants of scented ambience*’ could be established to carry out further study and analysis.

As noted earlier, a Confirmatory Factor Analysis (CFA) was administered involving the above mentioned 33 attitudinal statements (related to probable determinants of scented ambience). This was done involving another independent sample of 200 respondents using the same 5-point rating scales. The results are shown in Table A-3. It is to be noted that only those attitudinal statements were considered for analysis which indicated a factor loading greater than 0.5 (Hair et al., 2009). Also, only those common factors have been considered in the aforesaid analysis in which Composite Reliability (CR) was greater than 0.5 (as shown in Table A-3).

Table A-3: Results of CFA of Determinants of Scented Ambience

Scented ambience makes my time spent exciting (F1) (CR = 0.88, AVE = 0.51)			CFA
1	S2	Scented ambience attracts me a lot towards the products	0.72
2	S6	Scented ambience increases more shopping	0.57
3	S7	Scented ambience often holds my attention in the environment	0.74
4	S10	Scented ambience makes me eager to explore products	0.83
5	S13	Scented ambience makes walking in the corridors enjoyable	0.74
6	S14	Scented ambience often stimulates me to give individual attention	0.77
7	S18	Scented ambience makes me really enjoy the experience	0.58
Scented ambience makes my shopping interesting (F2) (CR = 0.81, AVE = 0.52)			CFA
1	S12	Scented ambience motivates me to talk more during shopping	0.52
2	S16	Scented ambience do not make me feel any wastage of time	0.76
3	S17	Scented ambience creates for me positive energy	0.81
4	S19	Scented ambience increases happiness of everyone	0.77
Scented ambience makes the billing process shorter (F3) (CR = 0.81, AVE = 0.46)			CFA
1	S23	Scented ambience creates a friendly atmosphere	0.52
2	S25	Scented ambience makes billing process easier	0.82
3	S26	Scented ambience makes the billing process devoid of boredom	0.69
4	S27	Scented ambience do not make me realize sometimes the long-time waited in making bills	0.80
5	S28	I do not feel of wasting time when waiting in a scented ambience	0.51
Scented ambience makes queuing for help enjoyable (F4) (CR = 0.54, AVE = 0.38)			CFA
1	S29	Scented ambience gives more pleasure in talking with salesman	0.54
2	S31	Scented ambience often makes the process of queuing for fulfilling queries interesting	0.68

Findings of One-way ANOVA revealed that the null sub-hypothesis ($(H_A)_0$) that there are no significant differences among the means of the influence of scented ambience prevailing in a retail outlet on the overall shopping experience of respondent consumers with respect to their preference for lavender fragrances could be rejected (p -value less than $\alpha=0.05$ (5%)). This

implies presence of significant differences among the above means in relation to their preference for lavender fragrance. From descriptive statistics, it has been observed that the mentioned mean was highest for those respondents who exhibited *high preference* for lavender fragrance (refer to Table A-4 and Figure A-1).

Table A-4: ANOVA-Influence of scented ambience prevailing in a retail outlet on the overall shopping experience of consumers and Preference for different fragrances

Sr. No.	Available Flavours of Scent	p-value	High Preference		Preference		Non Preference		High Non Preference	
			N	Means	N	Means	N	Means	N	Means
1	Lavender	0.000	327	4.950	192	4.650	3	4.000		
2	Jasmine	0.000	84	4.730	134	4.560	99	4.940	6	5.000
3	Rose	0.000	61	4.700	323	4.830	62	4.950	31	5.000
4	Orchid	0.000	446	4.900	78	4.500	5	5.000	6	5.000
5	Sandal	0.000	292	4.880	139	4.650	11	5.000		
6	Musk	0.000	281	4.900	141	4.620	36	5.000	3	5.000
7	Citrus	0.000	64	4.580	344	4.830	56	5.000	17	5.000
8	Vanilla	0.000	308	4.910	132	4.580	35	5.000	14	5.000
9	Amber	0.000	347	4.910	135	4.650	18	4.830	11	5.000

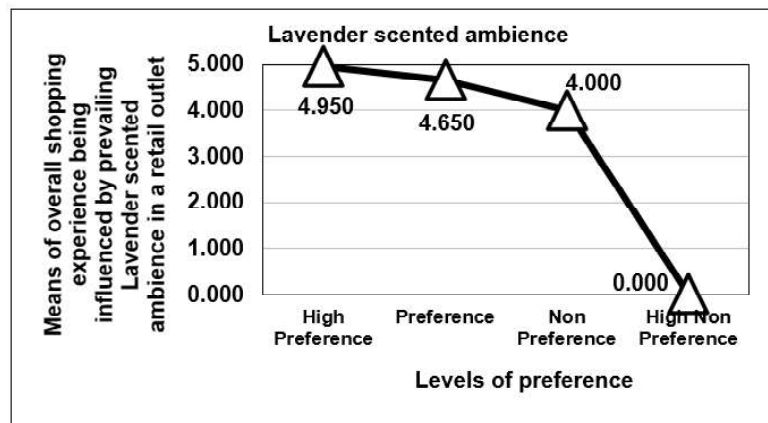


Figure A-1: Means of overall shopping experience being influenced by prevailing Lavender scented ambience in a retail outlet and Lavender scented ambience

This means that prevailing lavender fragrance has significant influence on consumers' overall shopping experience in a retail outlet. Also, this implies that prevailing lavender fragrances immensely entices consumers to any retail outlet. Games-Howell Post Hoc tests were conducted in this case as the presence of equal variances could not be assumed. These results indicated the existence of major differences among the above means across different levels of preferences for prevailing lavender fragrance in any retail outlet. Similar results of One-way ANOVA were noticed in case of Jasmine, Rose, Orchid, Sandal, Musk, Citrus, Vanilla and Amber scented fragrances in any retail outlet. However, descriptive results in

the above cases indicated that the aforementioned means of respondents' perception about the influence of scented ambience prevailing in a retail outlet on their overall shopping experience was highest in case of *non-preference* and/or *high non preference* for the above fragrances. These are shown in Table A-4 and Figures A-2, A-3, A-4, A-5, A-6, A-7, A-8 and A-9. As such, these fragrances may not be emphasized by their marketers while formulating marketing strategies for the same in order to maximize sales of any such scents to attract consumers in retail outlets. On the other hand, such marketers need to focus on lavender fragrance while formulating aforesaid marketing strategies.

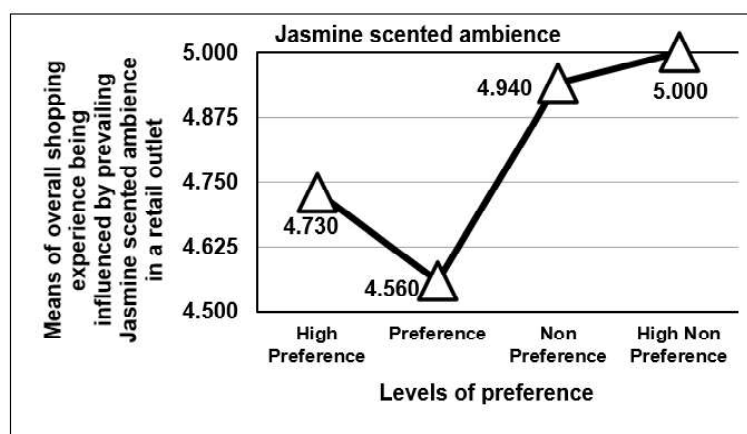


Figure A-2: Means of overall shopping experience being influenced by prevailing Jasmine scented ambience in a retail outlet and Lavender scented ambience

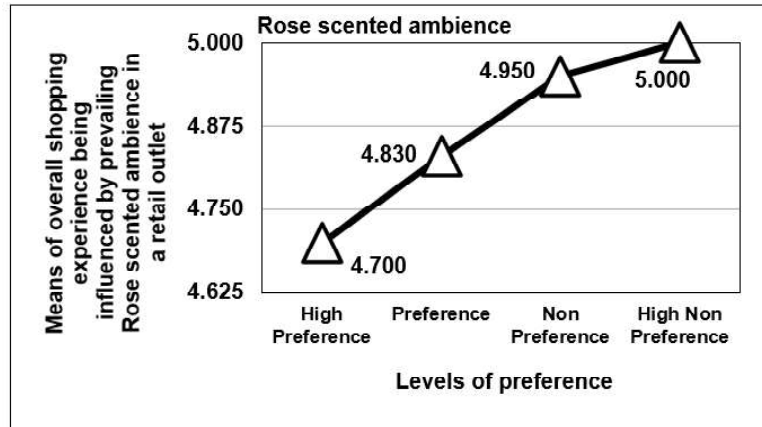


Figure A-3: Means of overall shopping experience being influenced by prevailing Rose scented ambience in a retail outlet and Lavender scented ambience

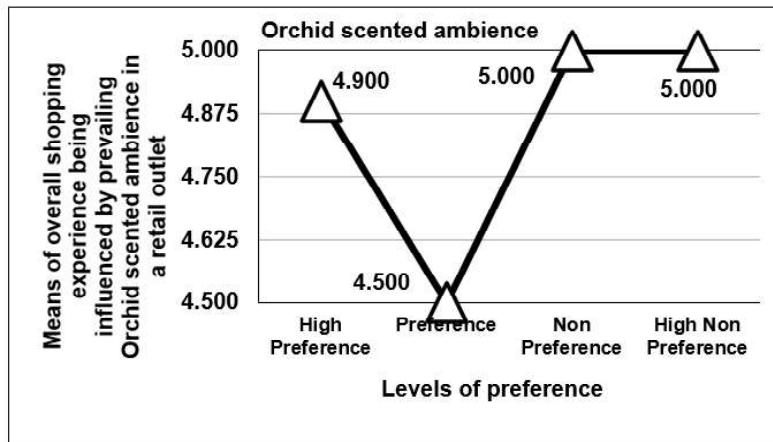


Figure A-4: Means of overall shopping experience being influenced by prevailing Orchid scented ambience in a retail outlet and Lavender scented ambience

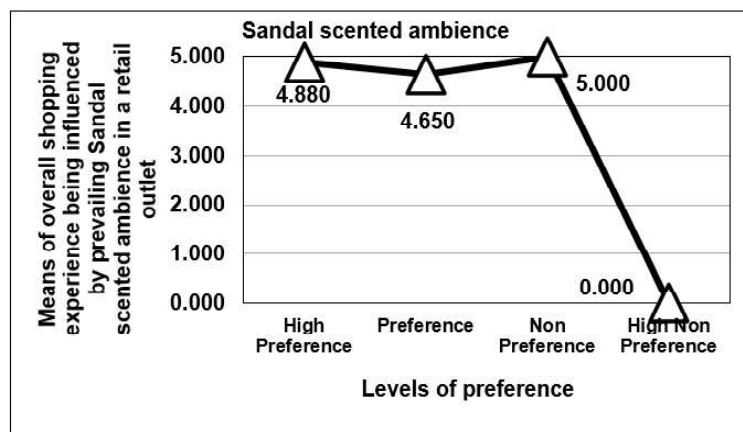


Figure A-5: Means of overall shopping experience being influenced by prevailing Sandal scented ambience in a retail outlet and Lavender scented ambience

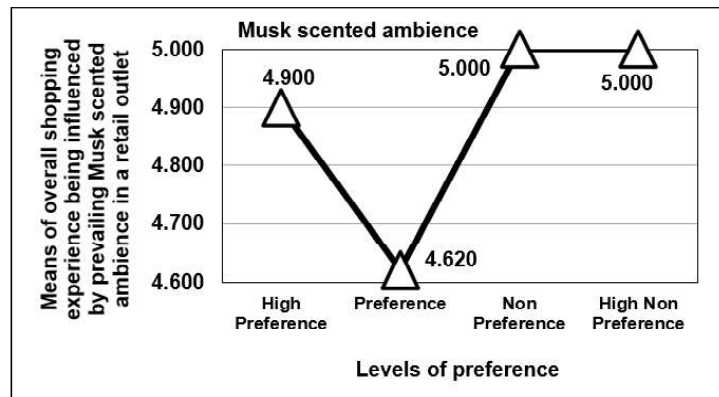


Figure A-6: Means of overall shopping experience being influenced by prevailing Musk scented ambience in a retail outlet and Lavender scented ambience

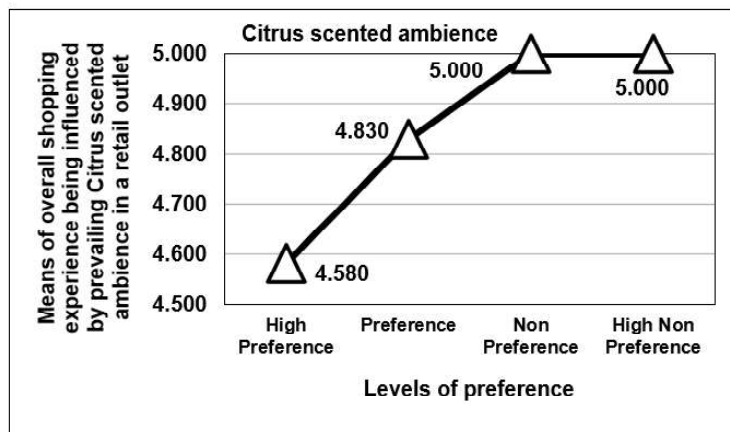


Figure A-7: Means of overall shopping experience being influenced by prevailing Citrus scented ambience in a retail outlet and Lavender scented ambience

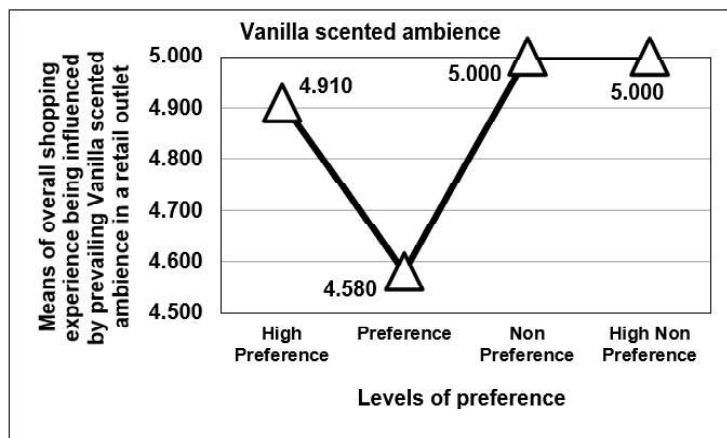


Figure A-8: Means of overall shopping experience being influenced by prevailing Vanilla scented ambience in a retail outlet and Lavender scented ambience

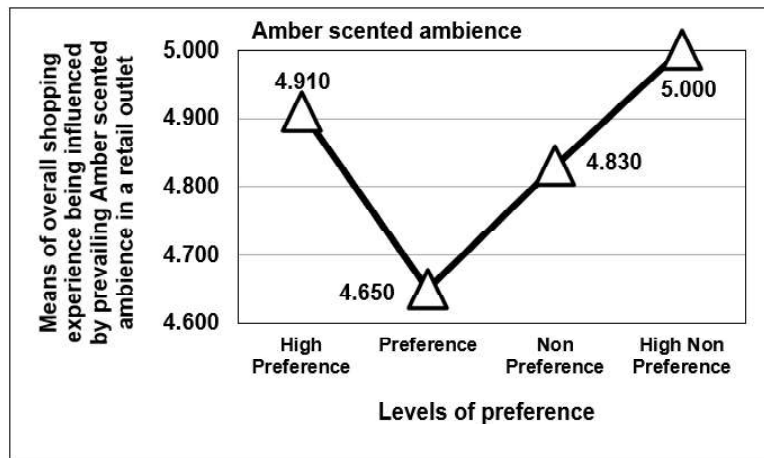


Figure A-9: Means of overall shopping experience being influenced by prevailing Amber scented ambience in a retail outlet and Lavender scented ambience

Managerial Implications

The study found that consumer's overall shopping experience in the retail outlet is influenced by scented ambience. This ultimately attracts consumers towards the outlet. From the study, it can be summarized that a novel way of marketing a retail outlet is to maintain a professionally planned scented ambience. Managers can use scented ambience in facilitating experiential marketing for consumers and increases their interest in shopping. It also eases the monotony in the queuing process. Further, such environment can be created to maintain a social atmosphere and to ensure more footfalls in a food court. As noted in the above findings, lavender fragrance is mostly preferred by the consumers. These are essential inputs for Housekeeping Managers in retail outlets so that they can maintain adequate stock of right flavour of scents to be used in the ambience of a retail environment. Moreover, marketers can use these findings as an input in creating appropriate theme(s) in marketing.

Conclusion

From the study it can be concluded that a scented ambience has a major effect on the functioning of a retail outlet by attracting consumers towards the store and consequently increase sales. It

further enhances their overall shopping experience by making it more enjoyable and exciting. Hence the null hypothesis framed is rejected and the alternative hypothesis has been accepted. Hence it can be stated that there do exist specific preference for fragrance of scents that entices consumers towards a retail outlet. It can be further concluded that lavender scent can be used to make the ambience of the retail environment more pleasant and attractive for consumers.

Limitations and Scope for Further Study

The study was confined to Guwahati city in North East India. The study does not include the demographic profile of the respondents, the inclusion of which would have made the paper more comprehensive. The study was conducted from the first quarter of 2022 to the first quarter of 2023. Further, a similar study can be carried out in the areas of comparative analysis on the determinants of scented ambience for rural and urban consumers. Besides, with the same objectives, similar studies can be carried out in other geographical regions.

Reference

Adams, P. (1998). Network typologies and virtual place. *Annals of the Association of American Geographers*, 88, 88-106.

- Aaker, D.A., Kumar, V., Leone, R.P., & Day, G.S. (2016). *Marketing Research* (11thed.). New Delhi: Wiley India (P) Limited, 345-400.
- Baker, J., Parasuraman, D., & Grewal, A. (1994). The influence of store environment on quality inferences and store image. *Journal of the Academy of Marketing Science*, 22, 328-339.
- Banat, A., & Wandebori, H. S. T. (2012, October 13-14). *Store Design and Store Atmosphere Effect on Customer Sales per Visit*. Paper presented at the Second International Conference on Business, Economics, Management and Behavioral Sciences (BEMBS'2012), Bali, Indonesia. Retrieved from <http://psrcentre.org/images/extrainages/10%201012545.pdf>.
- Bell, S., & Bell, C. P. (2007). Future Sense: Defining Brands through Scent. *The Journal of the Marketing Society*, 38(Autumn). Retrieved from http://www.marketing-society.org.uk/About/manifesto/growthdrivers/Documents/ML_Stephen_Bell.pdf.
- Bellizi, J., Crowley, A., & Hasty, R. (1983). The effects of colour in store design. *Journal of Retailing*, 59(Spring), 21-45.
- Berèik, J., Neomániová, K., Mravcová, A., and Gálová, J. (2021). Review of the Potential of Consumer Neuroscience for Aroma Marketing and Its Importance in Various Segments of Services. *Appl. Sci.* 2021, 11(16), 7636; <https://doi.org/10.3390/app11167636>
- Bitner, M. J. (1992). Servicescapes: the impact of physical surroundings on customers and employees. *Journal of Marketing*, 56(April), 57-71.
- Bone, P. F., & Ellen P. S. (1999). Scents in the marketplace: explaining a fraction of olfaction. *Journal of Retailing*, 75, 243-262.
- Brown, M. (2005, November 3). Sniffing out an overlooked branding opportunity. *Media: Asia's Media & Marketing Newspaper*, p.22.
- Chawla, D., & Sondhi, N. (2011). *Research Methodology* (1sted.). Noida: Vikas Publishing House Private Limited, 303-311.
- Chiguvu, D. (2017). Impact of Ambiance Conditions on Customer Satisfaction in the Restaurant Industry; Case Study of Debonairs Pizza Outlets in Botswana. *International Journal of Science and Research*, 6(2), 1825-1833.
- Cooper, D.R., Schindler, P.S., & Sharma, J.K. (2019). *Business Research Methods* (12thed.). New Delhi: McGraw Hill Education, 516-640.
- Danziger, P.N. (2017, September 21). Retailers, Time to Brand Your Store with a Signature Scent-Pumpkin Spice, Anyone? *Forbes*. Retrieved from <https://www.forbes.com/sites/pamdanziger/2017/09/21/retailers-time-to-brand-your-store-with-a-signature-scent-pumpkin-spice-anyone/#8d2b6b79b27e>.
- Davies, B. J., Kooijman, D., & Ward, P. (2003). The Sweet Smell of Success: Olfaction in Retailing. *Journal of Marketing Management*, 19(5/6), 611-627.
- Desjardins, C. (2014, May 27). Why retailers need to pay attention to the smell of their stores? *The News: Concordia University*, Montreal. Retrieved from <https://www.concordia.ca/cunews/main/stories/2014/05/27/why-retailers-needtopayattentiontothesmelloftheirstores.html>
- Devgan, D., & Kaur, M. (2010). Shopping Malls in India: Factors Affecting Indian Customers' Perceptions. *South Asian Journal of Management*, 17(2), 29-46.
- Douce, L., Poels, K., Janssens, W., & De Backer, C. (2013). Smelling the books: The effect of chocolate scent on purchase-related behavior in a bookstore. *Journal of Environmental Psychology*, 36, 65-69.
- Economist (1998, September 3). The Sweet Smell of Success. *Economist-Section Science and Technology*. Retrieved from <http://amp-economist.com.cdn.ampproject.org>.
- Flavián, C., Sánchez, S., & Orús, C. (2021). The influence of scent on virtual reality experiences: The role of aroma-content congruence. *Journal of Business Research*, Volume 123, pp. 289-301, <https://doi.org/10.1016/j.jbusres.2020.09.036>.

- Gowrishankkar, V. (2017). A Strategic Importance of Store Ambience for Retaining Customers. *International Journal of Management Research & Review*, 7(2), 129-133.
- Goldberg, R. & Niekerk, C. (2021). The Influence of Scent Marketing on Consumers' Approach and Avoidance Behaviour in the High-End Fashion Industry. *Mediterranean Journal of Social Sciences*. 12. 10.36941/mjss-2021-0024.
- Gao, Y., Wang, C., Huang, M. & Guo, W. (2022). A New Perspective of Sustainable Perception: Research on the Smellscape of Urban Block Space, *Sustainability* 2022, 14(15), 9184, <https://doi.org/10.3390/su14159184>.
- Gardner, M. P. (1985). Mood states and consumer behavior: A critical review. *Journal of Consumer Research*, 12(2), 281-300, doi:10.1086/208516.
- Gulas, C.S., & Bloch, P. H. (1995). Right under your nose: ambient scent and consumer responses. *Journal of Business psychology*, 10(1), 87-98.
- Hair Jr., J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2006). *Multivariate Data Analysis* (6thed.). New Delhi: Pearson Education Private Limited, 125-186, 794-865.
- Herz, R. S. (1998). Are Odours the Best Cues to Memory? A Cross-Modal Comparison of Associative Memory Stimuli a Source. *Annals of the New York Academy of Sciences*, 855(1), 670.
- Herz, R.S., Larsson, M., Trujillo, R., Casola, M.C., Ahmed, F.K., Lipe, S., and Brashear, M.E. (2022). A three-factor benefits framework for understanding consumer preference for scented household products: psychological interactions and implications for future development. *Cognitive Research* 7, 28 (2022). <https://doi.org/10.1186/s41235-022-00378-6>
- Hirsch, A. R. (1990, November 16). Preliminary results of olfaction Nike Study. Note distributed by the Smell and Taste Treatment and Research Foundation, Chicago, IL. Bone, P.F., and Jantrania, S. (1992), Olfaction as a cue for product quality, *Marketing Letters*, 289-296.
- Hirsch, A. R. (1995). Effects of ambient odours on slot-machine usage in a Las Vegas casino. *Psychology & Marketing*, 12, 585-594.
- Hirsch, A. R., & Gay, S. E. (1991). Effect of ambient olfactory stimuli on the evaluation of a common consumer product. *Chemical Senses*, 16, 115-136.
- Hunter, B.T.(1995). The sales appeal of scents. *Consumers' Research Magazine*, 78(10), 8-9.
- Hussain, R., & Ali, M. (2015). Effect of Store Atmosphere on Consumer Purchase Intention. *International Journal of Marketing Studies*, 7(2).
- India Brand Equity Foundation (IBEF) (2021, December 17). Retail Industry in India. Retrieved from <https://www.ibef.org/industry/retail-india.aspx>.
- Insights Success (2020, April 21). Challenges Retail Industry is Facing in India. Retrieved from <https://www.insightssuccess.in/challenges-retail-industry-is-facing-in-india>.
- Keefe, A. (2015, October 15). Scent Australia fills Ubet with Fresh Grass. Scent Australia. Retrieved from <https://www.scentaustralia.com.au/about/news/a-foolproof-guide-to-using-fragrance-in-store>.
- Kaplan, S. (1995). The restorative benefits of nature: Toward an integrative framework. *Journal of Environmental Psychology*, 15(3), 169-182, doi:10.1016/0272-4944(95)90001-2.
- Keefe, A. (2016, June 24). How one supermarket saw sales soar when it pumped out the scent of melon? Scent Australia. Retrieved from <https://www.scentaustralia.com.au/about/news/a-foolproof-guide-to-using-fragrance-in-store>.
- Keefe, A. (2017a, March 21). A foolproof guide to using fragrance in-store. Scent Australia. Retrieved from <https://www.scentaustralia.com.au/about/news/a-foolproof-guide-to-using-fragrance-in-store>.
- Keefe, A. (2017b, March 21). Nivea Experiments Scent. Scent Australia. Retrieved online from <https://www.scentaustralia.com.au/about/>

news/a-foolproof-guide-to-using-fragrance-in-store.

Knasko, S. C. (1989). Pleasant odours and congruency: Effects on approach behavior. *Chemical Senses*, 20, 479-87.

Lantos, G. P., & Podoshen, J. (2005). Brand Sense: How to Build Powerful Brands Through Touch, Taste, Smell, Sight and Sound. *Journal of Product & Brand Management*, 14(4), 278-279.

Lindström, M., & Kotler, P. (2005). Brand Sense: Build powerful brands through touch, taste, smell, sight and sound. New York: Free Press.

Lund, C. (2015). Selling through the Senses: Sensory Appeals in the Fashion Retail Environment. *Fashion Practice*, 7(1), 9–30.

Malhotra, N. K., & Dash, S. (2016). *Marketing Research: An Applied Orientation* (7thed.). Noida: Pearson Education, 67-220, 254-394, 494-501, 598-618, 718-719.

Malhotra, N.K., & Dash, S. (2019). *Marketing Research: An Applied Orientation* (7thRevised ed.). New Delhi: Pearson Education, 476-522.

Mattila, A. S., & Wirtz, J. (2001). Congruency of Scent and Music as a Driver of In-store Evaluations and Behavior, *Journal of Retailing*, 77(2), 273-289.

McPherson, A., & Moran, A. (1994). The significance of fragrance and olfactory acuity for consumer household market. *Journal of Consumer Studies and Home Economics*, 18, 239-51.

Mehrabian, A., & Russell, J.A. (1974). *An Approach to Environmental Psychology*. Cambridge, USA: The MIT Press.

Merrilees, B., & Miller, D. (2001). Superstore interactivity: a new self-service paradigm of retail service? *International Journal of Retail & Distribution Management*, 29, 379-389.

Minsky, L., Fahey, C., & Fabrigas, C. (2018, April 11). Inside the Invisible but Influential World of Scent Branding. *Harvard Business Review*, 47. Retrieved from [https://hbr.org/2018/04/inside-](https://hbr.org/2018/04/inside-the-invisible-but-influential-world-of-scent-branding)

[the-invisible-but-influential-world-of-scent-branding](https://hbr.org/2018/04/inside-the-invisible-but-influential-world-of-scent-branding).

Mombaerts, P. (2004). Love at First Smell- The 2004 Nobel Prize in Physiology or Medicine. *The New England Journal of Medicine*, 351(25), 2579-2580.

Morrin, M., & Ratneshwar, S. (2000). The Impact of Ambient Scent on Evaluation, Attention and Memory for Familiar and Unfamiliar Brands. *Journal of Business Research*, 49(2), 157-165.

Murwani, I., Rooseno, D., Cakramihardja, A., & Widjaja, J. (2023). The Impact of Sensory Marketing: Analysis of its Attributes Towards Online Perfume Users' Behavior. *International Journal of Professional Business Review*, DOI:[10.26668/businessreview/2023.v8i9.3439](https://doi.org/10.26668/businessreview/2023.v8i9.3439)

Nunnally, J. C. (1978). *Psychometric Theory* (2nded.). New York: McGraw-Hill.

Randhir, R., & Latasha, K. (2016). Analyzing the Impact of Sensory Marketing on Consumers: A Case Study of KFC. *Journal of US-China Public Administration*, 13(4), 278-292.

Sliburyte, L., & Vaitieke, J. (2019). Exploring the Effect of Ambient Scent on Consumer Impulsive Buying Behavior: Theoretical Insights. *Sciendo*, 101-118.

Spangenberg, E. R., Sprotta, D. E., Grohmann, B., & Tracy, D. L. (2006). Gender-congruent ambient scent influences on approach and avoidance behaviors in a retail store. *Journal of Business Research*, 59(120), 1281-1287.

Spangenberg, E. R., Grohmann, B., & Sprott, D. E. (2006). It began with the smell of smoke. *Marketing Letters*, 17(4), 265-275.

Spence, C., Puccinelli, N. M., Grewal, D., & Roggeveen, A. L. (2014). Store Atmospherics: A Multisensory Perspective. *Psychology and Marketing*, 31(7), 472-488.

Stangor, C., & Walinga, J. (2014). *Introduction to Psychology* (1stCanadian ed.) [e-book]. Victoria, Canada: BC campus. Retrieved from <https://opentextbc.ca/introductionto-psychology>.

- Strugnell, C., & Jones, L. (1999). Customer perception and opinions of fragrances in household products. *Nutrition and Food Science*, 99, 21-24.
- Sudman, S. (1976). *Applied Sampling*. San Diego, CA, USA: Academic Press.
- Tisdale, S.D. (2007). Scent of Desire: Discovering Our Enigmatic Sense of Smell. *U.S. News & World Report*, 143(23), 48-48.
- Vlahos, J. (2007, September 9). Scent and Sensibility. *The New York Times*, September 9. Retrieved from <https://www.nytimes.com/2007/09/09/realestate/keymagazine/909SCENT-txt.html>
- Vega-Gómez FI, Miranda-Gonzalez FJ, Pérez Mayo J, González-López ÓR, Pascual-Nebreda L. The Scent of Art. Perception, Evaluation, and Behaviour in a Museum in Response to Olfactory Marketing. *Sustainability*. 2020; 12(4):1384. <https://doi.org/10.3390/su12041384>
- Wilkie, M. (1995). Scent of a Market. *American Demographics*, 17(8), 40-47.
- Zaltman, G. (2003). *How Customers Think: Essential Insights into the Mind of the Market*. Cambridge, MA: Harvard Business Press.
- Zameer, A., & Mukherjee, D. (2011). Food and Grocery Retail: Patronage Behavior of Indian Urban Consumers. *South Asian Journal of Management*, 18(1), 119-148.
- Zoladz, P., & Raudenbush, B. (2005). Cognitive Enhancement through Stimulation of the Chemical Senses. *North American Journal of Psychology*, 7, 125-140.