

# Power of the Scent: Exploring the Role of Sensory Appeals on Consumer Product Attitude

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## *Abstract*

*Purpose – Sensory appeals of marketing advertisement plays an important role in the formation of product attitude. The objective of this paper is to examine the role of sensory appeal in influencing product attitude.*

*Method – In Study 1, experiment was conducted to determine whether cognitive innovativeness and sensory innovativeness are mediating the sensory appeals and impacting consumers' attitudes towards a product and whether mediation effects differ across various ad formats. Study 2 used a qualitative approach by applying ZMET (Zaltman-Metaphor Elicitation Technique) to translate the sensory appeals into metaphors associated with a perfume product and presented Hierarchical value Map (HVM) to uncover the underlying consumers' emotion, consequences, and values.*

*Findings – Results indicate that both cognitive innovativeness and sensory innovativeness have substantial mediating effects between sensory appeal preferences and consumer attitude towards a perfume product. Also, results present that sensory preferences using different delivery platforms impacts the effectiveness of the ad. The visual sense was found to be the most influential of all senses, marketers could adopt this approach in their practice of developing ad strategies for products.*

*Limitations – This study specifically considered only one type of product, perfume. Further studies may explore other products to allow for better generalizations.*

*Implications – The paper concludes with implications and applicability of the sensory approach of marketing for creating more effective advertisements.*

*Originality – This study finds contribution in understanding the mediating effects of sensory and cognitive innovativeness on consumer attitude for a*

*perfume product, which is an unexplored area. Marketing strategies should take into account these for enhancing product appeal.*

**Keywords:** sensory marketing, cognitive innovativeness, sensory innovativeness, Zaltman-metaphor elicitation technique (ZMET), hierarchal value map (HVM).

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## Introduction

Consumer behaviour theories present a broad range of consumer decision making stages through which information processing happens. Upon presentation of stimuli, consumers capture and assess the information collected by being exposed to and comprehend the information. This information could be made available to customers in the form of any sensory input (e.g. product aspects such as aroma, color, texture, design, etc. or information like price, brand etc.) which leads to arousal of an individual's sensory organs (Parducci, 1984).

The human senses (or Human Senses) act as an extraordinary source of information processing and information generation (Krishna & Schwarz, 2014). Humans continuously use them to create and recreate impressions of the stimuli around them, and these impressions are stored and processed leading to construct meaning about the stimuli (Yoon & Park, 2012). This will further help them to make decisions. It becomes important to understand the conduct of senses during decision making by the consumer.

Humans have five senses namely visual, auditory, palate, tactile, and olfactory. Different sensory usage and their different level of intensity have impact on sales, loyalty, and experience (Hultén, 2011; Lee, Jeong, & Oh, 2018; Velasco, Obrist, Petit, & Spence, 2018). There are studies which examined the negative impact of sensory cues on brand loyalty, sales, performance, and experience. For example, music was perceived as disturbing and interfering and negative effect was examined on brand sale and loyalty (Beverland, 2006; Craton & Lantos, 2011).

Literature also suggested that human senses can enhance brand loyalty by providing a superior brand experience. The level of impact created by different senses on brand loyalty was 3 different in intensity, with palate exerting the maximum

influence, followed by auditory, tactile, and visual. It has been found that higher is the sensory stimulation provided by a brand, greater its sensed value and which in turn linked to the marketing performance (Lindstorm, 2005; 2006).

Therefore, to develop a marketing strategy on the basis of sensory appeal offers important insights to the consumer market characterized by consumers' experiences and emotions (Ifeanyichukwu & Peter, 2018). This research unearths the mechanism by which sensory appeal influences product attitude with the use of both quantitative and qualitative methods to form a multi-sensory marketing model.

Previous literature suggested the influence of cognitive and sensory innovativeness on loyalty, attitude, product acceptance, shopping style, and so on (Fort-Rioche & Ackermann, 2013; Park, Yu, & Zhou, 2010; Trong, 2013). However, the role of mediating effect of sensory and cognitive innovativeness between sensory preference and consumer attitude remains limited. Therefore, the research explores the usage of different sensory appeals in the ad copy and its impact on product attitude.

The research is divided into two parts. Study 1 explores the mediating role of cognitive and sensory innovativeness between sensory preference and consumer attitude by conducting a quasi-experiment. Study 2 used ZMET technique to translate sensory appeals into images and metaphors. It extracts core sensory concepts associated with perfume to find practical implications for sensory marketing. These studies help to understand how sensory stimuli, either experiential or imaginary, through sensory and cognitive innovativeness influences consumer attitude.

## **Conceptualization and development of Hypothesis**

Humans' five senses help them understand things around them by recalling the information that resides in memories. Our sensory systems encode, retrieve, and reconstruct information all the time (Binh Nghiê-m-Phú, 2017). Our individual social backgrounds and cultural differences impact the way our senses interact with our memories (Yoon & Park, 2012). For example, pleasing fragrance of perfume improves both recall and recognition of unfamiliar brands rather than familiar brands (Morrin & Ratneshwar, 2000). This kind of information is important for organisations in developing their marketing strategies around sensory appeals in brand communications.

The current research suggests that sensory appeals invokes cognitive and sensory innovativeness, which in turn impact consumer attitude. Study 1 investigates the mediating effects of cognitive innovativeness and sensory innovativeness between sensory preference and consumer attitude, while also exploring how multisensory appeals influence consumer attitude using the five senses.

## **The mediating effects of cognitive innovativeness**

Cognitive innovativeness refers to the inclination of a human being to engage in innovative experiences which have the capability to stimulate ones thinking (Pearson, 1970). People who are cognitive innovators engage themselves in thinking, finding solutions to issues, and mentally stimulating exercises (Cotte & Wood, 2004).

Cognitive innovators are more inclined to organize, elaborate, and evaluate the information of the stimuli (Cacioppo and Petty, 1982). They have preference for verbal mode of processing rather than the visual mode of processing (Venkatraman & Price, 1990). This points out at the preferences of cognitive innovators at all levels of consumer behaviour, like depicted in their affinity and bent for mind-related, or their information processing modes. For example, free sample distribution for a product like noodles might be a good strategy for cognitive innovators as they are able to taste the product and make judgements on its uniqueness, quality, and to what extent it is able to satiate their taste buds.

The subsequent question that arises is: If this is the case, how does a consumers' preference towards sensory cues result in consumer attitude formation based on cognitive innovativeness? Generally, when consumers watch ad messages having sensory appeals, they first reclaim and organize information which is built in their memory based on their past sensory experiences (Park, Yu, & Zhou, 2010). This tendency leads them to evaluate and form attitude if this is a favourable or not for their individual self. Also, cognitive innovativeness might become more strengthened if the ad which will act as a stimuli is able to make them think and involve in mentally stimulating experiences. This positive result of cognitive innovativeness leads to a favourable consumer attitude towards ads and products. Therefore, cognitive innovativeness could be chosen as a mediating variable between sensory inclination and consumer attitude, and therefore, this study hypothesises

*H1: Consumer bent towards particular sensory cues in advertisements influences consumer attitudes through cognitive innovativeness applied on the received sensory information.*

## **The mediating effects of sensory innovativeness**

Sensory innovativeness refers to the person's inclination towards involving in internally generated experiences, including imagination, day-dreaming, fantasy, and so on and externally oriented adventurous engagements, like rafting, diving, and so on (Hirschman, 1984; Pearson, 1970; Zuckerman, 1979). Sensory innovators tend to respond to non-factual message appeals that comprise emotional and experiential features of products shown in the ads. They are also more persuaded by and have greater confidence in the non-factual ads versus the factual ads (Venkataraman & Price, 1990). This points out at the preferences of sensory innovators at all levels of consumer behavior, like depicted in their affinity and bent for experiential and

emotional stimulations. The question that arises is: If this is the case, how does a consumers' preference towards sensory cues result in consumer attitude formation based on sensory innovativeness?

Usually, when consumers watch ad messages having sensory appeals, they first reclaim experience based on their past sensory experience (Park, Yu, & Zhou, 2010). For example, when a consumer comes across an ad with an appeal of a fresh strawberry, and if their palate sense is a favorable sense for them, the ad image will be in sync with their perfect brand objective (i.e. a fresh tasting strawberry). Additionally, sensory innovativeness might become more strengthened if the ad is able to make them imagine an experience of eating a strawberry. This positive result of sensory innovativeness leads to a favorable consumer attitude towards ads and products. Therefore, Sensory innovativeness could be chosen as a mediating variable between sensory inclination and consumer attitude, and therefore, this study hypothesizes

*H2: Consumer bent towards particular sensory cues in advertisements influences consumer attitudes through sensory innovativeness applied on the received sensory information.*

## **Research Method: Study 1**

### **Pre-Test**

For study 1, researchers did pre-test which helped them in determining which advertisement (ad) was related with a core sensory appeal so that they could get control of consistency and maintain salience of ad copy. Researchers employed print ad rather than audio-visual ad because due to a variety of expressions and stimuli used in the latter, it makes difficult to extract one core sensory appeal.

A total of ten respondents from an undergraduate (BBA) class were enlisted. Participants were requested to bring five print ads demonstrating five senses. Researchers received ten print ads for each sense. Next, respondents were asked to rate these print ads based on their respective senses on a scale of 1 to 5. Based on the composite score, one ad was selected for each sense. Then, an ad was selected out of 5 ads which was a perfume ad, which had maximum standard deviation between respondents' ratings to confirm presence of one core sensory appeal. The order of sensory appeal in ad: olfactory (3.71), palate (3.28), auditory (2.49), visual (2.17), and tactile (0.13) with a standard deviation of 4.38. Therefore, the perfume ad representing the olfactory sensory clue was taken into consideration for Study 1.

### **Respondents Profile**

A total of 150 respondents were selected for Study 1 from BBA and MBA classes from an Indian university. Students were the most appropriate subject for research as they were regular users of perfume. In addition to this, respondents were

homogeneous in terms of their demographic and socioeconomic background, and this helped in reducing the chances of getting error happening due to heterogeneous sample (Calder et al., 1982). The respondents (97%) were in the age group of 18-23 where 65% were male respondents and rest were females.

### Procedures and Measures

The respondents were told that the objective of this study was to investigate a pilot test of a new print ad for a “Premium Perfume”. Respondents were asked to associate stimuli presented in the ad to their own experiences. An ad with an olfactory sensory appeal attained the maximum score in the pre-test. Therefore, the visual picturing a perfume glass bottle and spraying colourful fragrances was used. The ad copy read, “I smell the fragrance of Premium Perfume”.

Study 1 was conducted to investigate whether sensory and cognitive innovativeness play a mediator role between preference towards the sensory appeal and consumer attitude. Three separate sets of questionnaires A, B, and C were distributed to the respondents, with Type A included Ad copy (“I smell the fragrance of Premium Perfume”), Type B included visual, and Type C included Ad copy with Visual (Refer Figure 1, 2, & 3). Afterwards, respondents were requested to provide ratings to the statements measuring sensory innovativeness, cognitive innovativeness, and Consumer attitude on a scale of 7-point Likert type.

The construct of sensory innovativeness and Cognitive innovativeness were measured using the scale developed by Venkatraman and Price (1990). Four items used by Schivinski and Dabrowski (2014) were employed to measure consumer attitude. The sensory preference constructs were conceptualized by asking, “How much do you like the smell of premium perfume?”

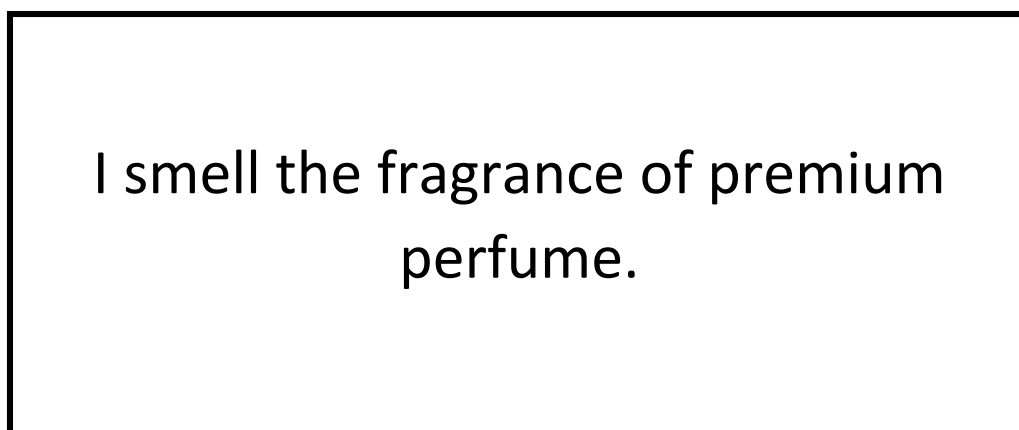


Figure 1: [TYPE A]



**Figure 2:** [TYPE B]



**Figure 3:** [TYPE C]

## Analysis Results

This study adopted steps suggested by Baron and Kenny (1986) to measure the mediating effects of sensory innovativeness on relationship between sensory appeal and consumer attitude. According to Baron and Kenny (1986), for mediation to be present, the predictor's regression coefficient statistics should be greater than the same predictor's regression coefficient found in the presence of mediator variable in the regression model. Multiple regression analysis was executed to confirm the mediating effects of sensory innovativeness using different set of questionnaires (Type A, B, and C).

The analysis suggested that sensory innovativeness has mediation effect as sensory preference beta coefficient was decreased in all three Ad types (Refer Table 1). The reduction values i.e.  $(a-b)/a$  were prominent for the Type B (16%), followed by Type C (13.3%), and Type A (3%). Thus Hypothesis 1 is accepted.

**Table 1:** Mediation effect of Sensory Innovativeness and Cognitive Innovativeness

Predictor	Criterion	Type A		Type B		Type C	
		Beta	t	Beta	t	Beta	t
Sensory preference	Attitude	0.241	1.720*	0.249	0.082*	0.278	2.008*
Sensory preference in the presence of sensory innovativeness	Attitude	0.233	1.357	0.209	1.408	0.241	1.720*
Beta reduction value $(a-b)/a$		0.033195021		0.16064257		0.133093525	
Sensory preference	Attitude	0.241	1.720*	0.249	0.082*	0.278	2.008*
Sensory preference in the presence of cognitive innovativeness	Attitude	0.151	1.023	0.205	1.359	0.268	1.892*
Beta reduction value $(a-b)/a$		0.373443983		0.176706827		0.035971223	

\* Significant at .10 level, \*\* Significant at .05 level, \*\*\* Significant at 0.01 level

The analysis suggested that cognitive innovativeness has mediation effect as beta sensory preference beta coefficient was decreased in all three Ad types (Refer Table 1). The reduction values i.e.  $(a-b)/a$  were prominent for the Copy only Ad (37.3%), followed by Visual Ad (17.6%), and Visual and Copy (3.5%). Thus Hypothesis 2 is accepted.

Lastly, Hypothesis 3 which hypothesized the effect of sensory appeals on consumer attitude and was tested. The result indicated that olfactory (beta=0.290, t=2.006) and Visual (beta=0.265, t=2.276) were significant influence on consumer attitude. On the other hand, tactile, auditory, and palate senses had no significant effect on consumer attitude (Refer Table 2).



**Table 2:** Effect of sensory appeals on consumer attitude

Independent Variable	Consumer attitude	t-value
Visual	0.265*	2.276
Tactile	-0.147	-1.228
Olfactory	0.29*	2.006
Auditory	-0.211	-1.292
Palate	-0.282	-1.869

\* Significant at 0.05 level

## Research Method: Study 2

Study 1 was performed to know the relation between sensory preferences and consumer attitude, based on the respondents' experiences. However, study 1 did not explain the reasons underlying their behaviours. Study 2 was conducted which brought qualitative aspects to this study. Qualitative research was used to offer respondents a chance to elaborately respond in their own words. This also allowed the researcher to understand the phenomenon in consumer's words, which tends to be more meaningful and unanticipated by researcher. The research employed Zaltman metaphor elicitation technique (ZMET) and presented with the help of Hierarchal value Map (HVM).

### Research Design

This research employed 'Flowers' instead of 'Perfume' in Study 2 as unconscious feelings can be inferred by giving participants with an ambiguous stimulus. The reason 'Flower' was chosen is that it is basic ingredient of any perfume (Sangat-Roemantyo, 1990). They were asked to draw meaning of flowers in their life and sensory appeal associated with flowers. This will allow participants to express their thoughts which originate on a deeper level than tapped by an explicit stimulus. This will support them to respond and interpret from his or her own particular frame of reference (Churchill, Brown, & Suter, 1990). It will help researchers to understand the sensory appeal associated with perfume and their attitude.

In step 1, ten university students were selected and asked to bring photographs that best represent what flowers meant to them from newspaper, magazines, books, and other sources. They were asked to describe each picture representing their feelings and thoughts of the "Meaning of Flowers". Next, they were asked to select three pictures randomly and explain how any two are similar, however, different from third. This helped us in identifying concepts and distinction among concepts at a higher level. Consequently, they were probed to widen the frame of a picture and explain what could enter in the picture to contradict the original picture. This helped us to explore their feelings and thinking in detail. Next, they were asked to weave a short story using pictures which could present the ideas about the topic in question. At the end, respondents were asked to represent five sensory appeals associated with flowers, which could help to analyse the effects of sensory images on consumer attitudes.

This study employed means end chain model to uncover the underlying consumers' emotions, consequences, and values (Perkins & Reynolds, 1988). Means end chain model suggested how consumers' associate attributes of products, and how it helps them to satisfy their personal values. It is based on the Attribute-Consequence-Value (A-C-V) order (Gengler, Mulvey, & Oglethorpe, 1999). It can be further presented by a hierarchical value model (HVM) of its three inter-connected levels: Attributes, its consequences, and personal values (Reynolds & Perkins, 1987).

## Findings

Zaltman and Coulter (1995) suggested that researcher should explore meaning embedded in the responses as images represent values which could lead to respondents' mental maps (During Step 1 of ZMET). Table 3 presents the images associated with the meanings of flowers in the respondents' lives. It also demonstrated reasons behind choosing these images. Out of seventeen presented images, twelve were based on tangible objects (Drink, Garden, Herbal product, Decoration, Artificial flower card, and so on) and four were of people and insect (People playing in water, A girl smelling a flower, a girl wearing flowers, a butterfly), and one abstract (Poem on flowers). The reasons indicated that respondents associated flowers with Nature, peace, and health. The findings indicated that visual sense (colourful and beautiful) was dominant.

**Table 3:** Images associated with Flowers and reasons for the selection of the images

Respondent	Images	Reasons for images
1	Refreshing drink	"It represents cool and refreshing nature of Flowers".
2	Red Roses	"It represents love and passion".
2	A girl smelling a flower	"It's aroma is natural and sweet".
3	Garden	"It is colorful and Beautiful".
3	Bouquet of flowers	"It is soft and Silky".
4	Rangoli	"It is colorful and represent our culture".
5	Artificial flowers card	"It helps us to show our concern and love to others".
5	Playing of holi using flowers	"It is harmless and promote peace".
6	Temple Decoration	"It is close to God and natural".
6	Herbal Product	"It is harmless and healthy".
7	Liril Soap	"It is refreshing and cool".
7	Butterfly	"It represents peace and color".
8	A cup of coffee ingrained flower	"It looks nice".
8	Agarbati for scent	"It's fragrance is natural and promotes spirituality".
9	A girl wearing flowers	"It is soft, silky, colorful, and beautiful".
10	Decoration in wedding ceremony	"It promotes social acceptance".
	Poem on Flowers	"It reflects peace and love".

Next, the respondents were asked to pen down sensory concepts associated with Flowers and rank them based on impact they had on consumer attitude (Refer Table 4). The result suggested the influence of sensory concepts on consumer attitude and indicated that visual had the highest influence (average rank=1.7), followed by Olfactory (2.3), Tactile (2.5), Palate (4.1), and Auditory (4.3). The findings of Study 2 suggested slight variation from the results of Study 1, which suggested the significant effect of olfactory and visual sense on consumer attitude.

**Table 4:** Sensory appeal and the ranked influence on Consumer attitude

Respondent	Visual	Auditory	Olfactory	Palate	Tactile					
1	Red color	1	Brizzy	5	Fragrance	3	Sweet	4	Soft	2
2	Colorful	1	Echo	5	Sweet aroma	3	Sweetness	4	Smooth	2
3	Pretty	1	Murmur	4	Perfumed aroma	3	Tart	5	Velvet	2
4	Pleasant	2	Whisper	5	Sweet Perfumed	1	Licorice	4	Softness	3
5	Vivid	4	Calm	5	Fragrance	1	Roofaza	3	Smooth	2
6	Green	1	Waterfall	2	Perfumed	3	Bitter	4	Bubbles	5
7	Colorful	1	Chirping	4	Sweet	2	Bitter	5	Cozy	3
8	White	3	Scared	5	Sweet aroma	1	Pungent	3	Warmth	2
9	Bright	1	Whisper	5	Scent	2	Spicy	4	Delicate	3
10	Glowing	2	Wedding bells	3	Seductive	4	Minty	5	Smooth	1
Avg. Rank	1.7		4.3		Intense	2.3		4.1		2.5

In study 2, visual sensory appeal was found to be more influential, mainly represented by a color/colourful (mentioned three times) and bright/glowing (mentioned two times). This result reveals that colour plays a vital role in the formation of consumer attitude. Also, "fragrance/aroma" was mentioned five times for olfactory-related sensory appeal. This result suggests that fragrance/aroma may play significant role in forming consumer attitude.

The study presented Hierarchical value model using means end chain model. Here attributes refer to "the intrinsic and physical features, characteristics that define a product, person, or a thing" (Gengler et al., 1999). The findings suggested - colourful, soft, fragrance, sweetness, freshness, natural, and beautiful as attributes of Flowers.

Next, Consequences represent "consumer's feeling after the consumption of the product, this might be a positive feeling such as benefits, or a negative feeling such as perceived risks" (Lin, 2002). It comes at the intermediary level in the HVM map, and have abstract meaning which reflects perceived benefits (Gengler et al., 1999).

The underlying consequences linked to perfume attributes represent the next level of the HVM. The key benefits that appear at this level include health, relax, social acceptability, optimism, self-expression, relax and healthy. Interestingly, fragrance, color, beautiful are also linked to the development of optimism (consequence) with the perfume. Participants mention the development of optimism as a core consequence of the perfume's fragrance, color, beautiful (attribute). Results of this

study show that social acceptability is seen as an important consequence of perfume attributes of beautiful, aroma, and natural. 13

Values represent the most abstract level in the chain and defined as “an enduring belief that a specific mode of conduct or end-states existence is personally and socially preferable to alternative modes of conduct and end-states existence” (Rokeach, 1968, p. 160). Values influence behaviors, attitude, and evaluations across specific objects and situations (Thyne, 2001). The values indicated in study 2 could form criteria for the formation of attitude. Sense of accomplishment is highlighted through happiness, togetherness, confidence and which are further derived from optimism, relax, and health, and social acceptability and suggested that these might play significant role in the formation of consumer attitude.

## Discussion and Implications

The present research studied the impact of sensory preferences on product attitude in the perfume category with the intent of validating the mediating effects of sensory innovativeness and cognitive innovativeness. The study also enquired on the role of sensory appeals’ emblematic images in the development of product attitude by drawing forth sensory theories on a perfume product based on qualitative methods.

Sensory innovativeness and cognitive innovativeness are substantial intermediaries between the sensory cue preference and product attitude. Interestingly, the ad with only a visual component showed significantly more mediating effects as compared to ads with copy only or copy and visual both. This throws light on the idea that creative strategies can be used by product managers by adopting different sensory based preferences across delivery platforms so as to maximize ad effectiveness.

For study 2 which was based on qualitative methodology, the perfume category produced basic sensory concepts which were based on symbolic imagery analysis and applied ZMET technique. In terms of value of applicability, the rankings of sensory appeals which most impacted attitude towards the product were visual, olfactory, tactile, palate related, and auditory. Results indicated that visual, followed by olfactory rank highest in eliciting product attitude. This outcome reinforces the correctness of adopting the qualitative approach for the perfume category, for dwelling into some of these interesting aspects around synaesthetical concepts. This establishment pertaining to the current research backs the establishment of the presence of synaesthetic traits in sensory image-based comparisons described by respondents around the considered product category. This synergistic approach could be particularly helpful in formulation of copy or visual concepts designed for a advertisement. Higher the magnitude of this synergistic effect, the better outcome in terms of boosting product preference.

The perfume brands should consider the core brand associations such as nature, freshness, purity, colorfulness, and aroma in their promotional activities. As these associations further highlights consumer benefits through health, relaxation, social acceptance, and formation of optimism. These benefits are valued by consumers, as

they provide consumers with happiness, confidence, togetherness, and ultimately a sense of accomplishment.

For future research directions, we suggest the use of more than one category (related or unrelated) to enable comparison between various categories. This would provide opportunity for a more comprehensive approach towards comparing the effects of sensory based approaches on brand as well as ad attitude. Such an approach would help researchers formulate product category specific branding strategies and contribute to enriching academic literature around product-base sensory branding.

Future research could compare the intensity of the impact of various sensory based appeals for different cultures as there may be difference in how people respond to various sensory stimuli depending on the cultures that they have been part of (Hultén, 2017). Therefore, culture specific studies pertaining to various product categories would be a significant research contribution.

This study used a mix of quantitative and qualitative methods which demonstrated as useful for their complementary usefulness. This was worthy as it led to generation of a deeper interpretation of the subject under study. Future studies may use similar research focus around different facets of sensory effect using diverse brands. Additionally, a greater number of studies deploying rigorous qualitative techniques, such as thematic appreciation tests etc. could be undertaken for enabling deeper interpretations.

## References

- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173-82.
- Binh Nghiệm-Phú. (2017). Sensory marketing in an outdoor out-store shopping environment – an exploratory study in Japan. *Asia Pacific Journal of Marketing and Logistics*, 29(5), 994-1016.
- Beverland, M., Lim, E. A. C., Morrison, M., & Terziovski, M. (2006). In-store music and consumer–brand relationships: Relational transformation following experiences of (mis) fit. *Journal of Business Research*, 59(9), 982-989.
- Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of personality and social psychology*, 42(1), 116-131.
- Calder, B. J., Phillips, L. W., & Tybout, A. M. (1982). The concept of external validity. *Journal of Consumer Research*, 9(3), 240-244.
- Churchill, G. A., & Iacobucci, D. (2006). *Marketing research: methodological foundations*. New York: Dryden Press.
- Churchill, G. A., Brown, T. J., & Suter, T. A. (1992). *Basic marketing research*. Fort Worth, TX: Dryden Press.

- Cooper P. & Braithwaite A. (2002). Synesthesia: researching the power of sensation, paper presented at ESOMAR Worldwide Qualitative Research Conference, Boston.
- Cotte, J., & Wood, S. L. (2004). Families and innovative consumer behavior: A triadic analysis of sibling and parental influence. *Journal of consumer research*, 31(1), 78-86.
- Craton, L. G., & Lantos, G. P. (2011). Attitude toward the advertising music: an overlooked potential pitfall in commercials. *Journal of Consumer Marketing*, 28(6), 396-411.
- Creswell, J. W. (1998). *Quality inquiry and research design: Choosing among five traditions*. New Delhi: Thousand Oaks.
- Fort-Rioche, L. & Ackermann, C. (2013). Consumer innovativeness, perceived innovation and attitude towards "neo-retro"-product design. *European Journal of Innovation Management*, 16(4), 495-516.
- Gengler, C., Mulvey, M. S., & Oglethorpe, J. E. (1999). A means-end analysis of mother's infant feeding choices. *Journal of Public Policy & Marketing*, 18(2), 172-188.
- Hirschman, E. C. (1984). Experience seeking: a subjectivist perspective of consumption. *Journal of Business research*, 12(1), 115-136.
- Hultén, B. (2011). Sensory marketing: the multi-sensory brand-experience concept. *European Business Review*, 23(3), 256-273.
- Hultén, B. (2017). Branding by the five senses: A sensory branding framework. *Journal of Brand Strategy*, 6(3), 281-292.
- Ifeanyichukwu, C. D., & Peter, A. (2018). The Role of Sensory Marketing in Achieving Customer Patronage in Fast Food Restaurants in Awka. *International Research Journal of Management, IT and Social Sciences (IRJMIS)*, 5(2), 155-163.
- Krishna, A. and Schwarz, N. (2014), Sensory marketing, embodiment, and grounded cognition: A review and introduction. *Journal of Consumer Psychology*, 24, 159-168
- Leão, A. L. M. D. S., & Mello, S. C. (2003). Conhecendo o "valor do cliente" de um jornal on-line. *Revista de Administração de Empresas*, 43(3), 22-35.
- Leão, A. L. M. S., & Mello, S. C. B. (2001). Mensurando customer value através do método laddering: uma proposta de aplicação da técnica para o ambiente virtual. *Anais do Encontro Nacional dos Programas de Pós-Graduação em Administração*, Campinas, SP, Brasil, 25.

- Leão, A. L. M. S., & Mello, S. C. B. (2002). Conhecendo o valor do cliente virtual: uma análise utilizando a teoria de cadeias de meios-fim. *Anais do Encontro Nacional dos Programas de Pós-Graduação em Administração*, Salvador, BA, Brasil, 26.
- Lee, S., Jeong, M., & Oh, H. (2018) Enhancing customers' positive responses: Applying sensory marketing to the hotel website, *Journal of Global Scholars of Marketing Science*, 28(1), 68-85.
- Lin, C. F. (2002). Attribute-consequence-value linkages: A new technique for understanding customers' product knowledge. *Journal of Targeting, Measurement and Analysis for Marketing*, 10(4), 339-352.
- Lindstrom, M. (2005). Broad sensory branding. *Journal of Product & Brand Management*, 14(2), 84-87.
- Lindstrom, M. (2006). Brand sense: How to build powerful brands through touch, taste, smell, sight and sound. *Strategic Direction*, 22(2).
- Morrin, M., & Ratneshwar, S. (2003). Does it make sense to use scents to enhance brand memory?. *Journal of Marketing Research*, 40(1), 10-25.
- Park, J., Yu, J., & Zhou, J. (2010) Consumer innovativeness and shopping styles. *Journal of Consumer Marketing*, 27(5), 437-446,
- Parducci, A. (1974). Contextual effects: A range-frequency analysis. *Handbook of perception*, 2, 127-141.
- Pearson, P. H. (1970). Relationships between global and specified measures of novelty seeking. *Journal of Consulting and Clinical Psychology*, 34(2), 199.
- Perkins, W. S., & Reynolds, T. J. (1988). The explanatory power of values in preference judgements: Validation of the means-end perspective. *ACR North American Advances*, 15, 122-26.
- Petit, O., Basso, F., Merunka, D., Spence, C., Cheok, A. D. and Oullier, O. (2016), Pleasure and the Control of Food Intake: An Embodied Cognition Approach to Consumer Self-Regulation. *Psychol. Mark.*, 33, 608-619.
- Reynolds, T. J., & Perkins, W. S. (1987). Cognitive differentiation analysis: a new methodology for assessing the validity of means-end hierarchies. *Advances in Consumer Research*, 14, 109-13.
- Rokeach, M. (1968). A theory of organization and change within value-attitude systems. *Journal of Social Issues*, 24(1), 13-33.
- Sangat-Roemantyo, H. (1990). Ethnobotany of the Javanese incense. *Economic Botany*, 44(3), 413-416.

- Schivinski, B., & Dabrowski, D. (2016). The effect of social media communication on consumer perceptions of brands. *Journal of Marketing Communications*, 22(2), 189-214.
- Solomon, M. R., Russell-Bennett, R., & Previte, J. (2013). *Consumer behaviour: Buying, having, being*. Pearson: Australia.
- Thyne, M. (2001). The importance of values research for nonprofit organisations: The motivation - based values of museum visitors. *International Journal of Nonprofit and Voluntary Sector Marketing*, 6(2), 116-130.
- Truong, Y. (2013). A cross-country study of consumer innovativeness and technological service innovation. *Journal of Retailing and Consumer Services*, 20(1), 130-137.
- Velasco, C., Obrist, M., Petit, O., & Spence, C. (2018). Multisensory technology for flavor augmentation: a mini review. *Frontiers in psychology*, 9, 26.
- Venkatraman, M. P., & Price, L. L. (1990). Differentiating between cognitive and sensory innovativeness: Concepts, measurement, and implications. *Journal of Business Research*, 20(4), 293-315.
- Yoon, S. J., & Park, J. E. (2012). Do sensory ad appeals influence brand attitude?. *Journal of Business Research*, 65(11), 1534-1542.
- Zaltman, G, & Coulter, R. H. (1995). Seeing the voice of the customer: Metaphor-based advertising research. *Journal of advertising research*, 35(4), 35.
- Zuckerman, M. (1979). *Sensation seeking*. John Wiley & Sons: UK.



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