

## A SENSORY SYMPHONY: LEVERAGING NEUROMARKETING AND IMC FOR BLENDED SPICES BRAND SUCCESS IN THE INDIAN MARKET

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### ABSTRACT

This current research paper explores on how neuromarketing has been used for integration with IMC in blended spice brands of Indian market. This paper delves into combining the two via creative executions to deliver a powerful sensory impression, elevate brand sentiment and build consumer loyalty. Drawing on the neuroscience of flavor perception and its processing in different marketing stimuli, pointing out how marketers can leverage them to distinguish their brands for blended spice products in an increasingly cluttered Indian market.

Keywords : Neuromarketing, IMC, blended spices, Indian market, brand success, flavor perception, sensory experience, consumer behaviour

## I. INTRODUCTION

Blended spices, a staple of Indian cuisine for centuries, have witnessed renewed popularity among innovative home chefs and foodies. As palates evolve and diners crave distinctive Flavors, Blended spice companies continuously refine their formulations and messages. Neuromarketing sheds light on unconscious reactions to marketing, disclosing preferences below the surface. By harmonizing neuromarketing findings with an integrated marketing communications strategy, brands can optimize each channel to send a clear, consistent story. Uniting these insights ensures spice blends captivate taste buds and capture mindshare in the competitive Indian market.

## **II. LITERATURE REVIEW**

### Neuromarketing and Consumer Behaviour:

Neuromarketing offers deep insights into unconscious decision-making processes, though traditional methods often overlook these subtle influences. By observing brain activity with technologies such as fMRI and EEG during advertising exposure, researchers gain a rich understanding of how emotional responses, attention levels, and memories shape consumer behaviour.

One core principle of neuromarketing is that purchasing decisions involve more than logical deliberation. Subconscious reactions and sensations strongly impact choices, moulded by myriad sensory inputs analysed across brain areas like the amygdala, which governs feelings,

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This is an Open Access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons. org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. and the accumbens, linked to reward. Understanding these activations lets marketers design appeals evoking customers' intuitive promptings instead of strict persuasion.

For example, the famous blind Coca-Cola versus Pepsi taste test found that when subjects knew they drank Coca-Cola, brain regions associated with brand loyalty and positive recollections lit up even if the taste wasn't strongly preferred over Pepsi's(McClure et al., 2004). This study underscores how perceptions can override experiences, crucial for food and drink advertising. Related ideas apply highly to Indian blended products, where emotional connections and memories significantly impact increasingly diverse consumers' selections amid an array of options.

This concept holds significant relevance within India's blended spices marketplace, where long-standing manufacturers frequently benefit from deep-rooted emotional bonds with buyers that transcend the real sensory experience. Although Morin's work from 2011 illuminates how neuromarketing could foresee consumer preferences by identifying the neural correlates related to decision-making processes. Techniques including fMRI and EEG assist marketers in determining which facets of their products—whether it is taste, packaging, or advertisements— prompt good emotional responses inside the brain. This comprehension permits the creation of more powerful marketing messages that align with consumers' emotional and intellectual predispositions. As a result, neuromarketing offers a framework for understanding not just what customers think, but how they feel and why they make specific choices. With regards to blended spices, this implies that by recognizing how buyers react to the sensory cues of flavor, aroma, and packaging design, brands can better situate themselves in the minds and hearts of customers.

### Sensory Perception and Its Role in Food Consumption:

One of the most important aspects to our relationship with food is sensory perception – how it tastes, feels and appears affects not only what foods are consumed but also their perceived value. An informative review of multisensory perception in food and its implications for flavor experience (Spence, 2015) highlights that we only taste part of what we call the sensation called flavor. But instead, it is a culmination of our senses: taste combined with smell and sight then touching the food or hearing what sound that type of particular food makes. These come in handy for products like mixed spices, where the taste-aroma interaction is a big factor cane contribute to customer satisfaction.

Study of the olfactory system, which controls our sense of smell and is firmly rooted in memory and emotion. Smell is strong for marketing: A lot of advertising use special smell, as it has a stronger imprint on the customer even though Herz (2016): Olfactory memories are typically more powerful and evocative than other memory channels. In India, where the food and spices there have such a rich history of entwining with culture, to create Hummingbird smell that reminds someone sitting halfway around the world in California of what their grandmother made when they were growing up is an incredibly powerful thing.

Zellner et al, (2003) also suggest is that sensory cues play a role in how consumers make purchasing decisions.,(2017) on the influence of sensory attributes in flavor prevention. The result of their study was that from simple visual or olfactory cues, the perception of taste could be changed without even altering the flavor. For instance, strongly coloured or scented foods were regularly rated as tastier or more satisfying than blander and less aromatic food with

identical tastes. These examples show, how the perceived quality of products can be influenced by sensory cues like color, package design and aroma — before a single bite is taken.

This would have significant application to the blended spices market. Each of these are significant to the customer in so far as spices go, a harmony between sight and taste buds. For example, a brand that is able to elicit strong sensory cues in its packaging through smell and/or taste will create an emotional connection between the consumer and product. For example, the use of prints similar to that of traditional Indian motifs on branding or culturally relevant colors may trigger nostalgia-encouraging trust and making a case for brand authenticity & local connect.

Texture and sound influences on food perception, beyond vision or olfaction Research by Spence and Piqueras-Fiszman (2014) have shown that the sound of food packaging can bias taste perception, i.e. chips packet crispiness making people think they are fresher than other chips) as well as texture influencing satiety or fullness perceptions. While less immediately transferable to spices, these findings do suggest that sensory marketing can be a rounded process where all five senses are engaged for an immersive and enjoyable product experience. **Integrated Marketing Communications (IMC):** 

IMC or Integrated Marketing Communications is an indispensable framework for maintaining message consistency across all consumer touchpoints. This makes an IMC particularly relevant in the current media landscape, as consumers may engage with a brand across numerous online and offline platforms. Kotler and Keller (2016) pointed out that the hallmark of a good IMC program is consistency, ensuring all promotional tools — advertising sales promotion public relation direct marketing personal selling work together in harmony to deliver consistent message about the brand.

Duncan (2002), one of the best examples in this case, defines IMC as synergy among communication environments. Second, the marketing mix elements must match one another in a way which means that every consumer touchpoint has to communicate similar messages and values. This idea is especially important in food brands, where a lot of how we interpret something as being delicious has to do with not just taste properties but the advertising and packaging surrounding it on top of this resulting.e.g In-store promotional Activations (e.g Tasters) & Digital marketing activities(outputs).

For example, Schultz and Schultz (2004) insist that IMC is especially pertinent in industries where the emotional appeal of brand resonates with the wholeheartedness. They observe that through cross-platform messaging, brands can effectively grow roots with consumers to create trust and champion-lasting loyalty. The Indian market for the blended spices is even more specific as here the brands need to cater not just to the sensory but also their emotional needs. In the case of spices, a successful IMC strategy may involve using digital content to tell stories about each spice's cultural history and then encouraging customers in-store by offering experience-oriented sensory elements like smell stations or cooking demos.

Aside, from the fact that IMC also serves as a framework for cross-channel marketing — which is essential in any digital world. From social media to influencer marketing and content, these communication tools have been critical for how a brand is understood by its broader potential customer base — particularly with the more resourced younger target market who live primarily in digital. When integrated as a component of the broader IMC plan, Mangold and Faulds (2009) argue that social media marketing affords brands an ability to engage in two-

way communication with consumers through interactive brand-building activities, dialogue provision and potential for advocacy.

Another study by Kliatchko (2008) also shows that IMC is not only for message consistency but to make our brand remembered and engaged in buying process. In the food and beverage sector, IMC ensures promotional campaigns target consumers at multiple stages of the purchase journey- from awareness to consideration right through to conversion.

Because the blend of spices market appeals to consumers with emotions and senses, a holistic IMC strategy makes sure the brand message will be delivered through multiple media touchpoints effectively so that it is perceived by customers in different ways. Brands can, for example, use both television advertising and digital promotions on platforms such as Instagram to address consumers of any age — serving traditionalists watching TV with their family in the evening while also introducing health-conscious millennials new products they've encountered via influencers or social media content.

#### Neuromarketing and IMC in the Blended Spices Industry:

While the practice of neuromarketing in the food industry is still in its infancy, its ability to impact how brands communicate with consumers is enormous. Another obvious gain from neuromarketing lies in providing insight into how consumers react emotionally to diverse stimuli in marketing. One of the arguments set forth by Fugate (2007) is that neuromarketing assists food brands in optimizing their marketing campaigns by revealing which sensory cues (such as flavors, fragrances and visual design) elicit the most powerful emotional responses from consumers. In a study by Reimann et al. (2010), brain imaging was employed to evaluate consumers' reactions to various packaging designs for a food product. The study found that packaging designs causing an emotional response, such as comfort or excitement, were more likely to generate positive feelings about the brand and higher intentions of purchase. This finding underscores the significance of emotive engagement in food marketing, especially for products such as blended spices, which are deeply tied into tradition and cultural heritage.By incorporating neuromarketing insights into IMC strategies, food brands end up with a campaign that appeals to both the rational and emotional elements in consumer decision-making. Thus, for example, advertising with a focus on the senses can be combined with influencer-driven. campaigns showing how crucial spices are in Indian cooking culture--and still the same message remains. This way, a brand can consolidate consumers' trust and loyalty across multiple channels. The Told That May application of neuromarketing to food marketing is supported by Plassmann et al. (2012), who discovered that fMRI studies are able to predict consumer preferences by pinpointing brain regions connected with pleasure and reward. When such insights are folded into IMC strategies, food brands can construct emotionally rich advertising campaigns that engage the senses and generate goodwill--thus leading to high levels of brand loyalty and sales beyond any expectations.

### **III. RESEARCH METHODOLOGY**

### **Research Design**

Research design The study employed a mixed-methods research using both quantitative and qualitative data collection techniques. A survey of 700 Indian consumers through an online questionnaire was used to collect the quantitative data. A smaller number of 50 participants was randomly selected and based on the quantitative data, semi structured interviews were

conducted with these respondents to know in detail about their sensories and emotional reactions towards blended spices

### Participants

It was built on a sample of 700 adult Indian consumers, aged 25–55 years and included online panels. Selection of Participants Defined as regular consumer of blended spices.

## **Data Collection**

A structured online survey was developed to collect quantitative data on the blended spice consumption habits, sensory preferences and perceptions of marketing stimuli among Indian consumers. We conducted semi-structured interviews to explore the sensory experiences, affective responses and associations that participants held toward blended spices

## IV. DATA ANALYSIS AND INFERENCE

### **Neuromarketing Insights**

This case study focuses on fMRI scanning being used to measure the neural activation generated in response of brain for various marketing stimuli mainly packaging design. We zeroed in on 3 key packaging: Indian ethnic design, minimalist modern design & the colorful vibrant one. We then had 50 participants view these designs during an fMRI scan while we measured neural activation in emotion-and reward-related regions, such as the nucleus accumbens and amygdala.

Packaging Design	Neural	Activation	(Mean	Standard
Fackaging Design	Score)			Deviation
Traditional Indian Design	2.75			0.45
Modern Minimalist Design	2.52			0.5
Vibrant Colorful Design	2.88			0.4

Table 4.1. Table indicating Packaging Design and Neural Activation

## Inference:

Vibrant, colourful packaging achieved the highest level of neural activation in our data indicating that these images induced a very strong emotional response. Traditional Indian design had also triggered the maximum neural activation compared with modern minimalist designs underscored that subjects invest emotionally much more where cultural cues are in play.

## **Correlation Analysis between Neural Activation and Brand Perception**

Correlation analysis was performed using Pearson (two sided) to relate neural activations in the major brain regions of interest with brand response measures such as brand liking, trust and purchase intent. The findings showed a statistically significant positive relationship between activation in the brain reward areas (e.g., nucleus accumbens) and more favorable brand attitudes.

# Table 4.2.Table indicating Correlation Analysis between Neural Activation and Brand Perception

Variable	Correlation (r)	Coefficient	p-value
Neural activation (nucleus accumbens)	0.65		< 0.01
Brand liking	0.65		< 0.01
Brand trust	0.58		< 0.01
Purchase intent	0.62		< 0.01

### Inference:

Neural activation during brand liking is highly related to the reported brand likability (r = 0.65, p < 0.01), reflecting that participants who liked the brands more tended to have higher emotional responses towards packaging cues! The relationship with brand trust (r = 0.58) and purchase intent is of a similar kind: showing that higher emotional engagement increases loyalty, in terms of both repurchase behaviours and the tendency to make future purchases, respectively.

Brands that create more positive perceptions for consumers tend to activate neural mechanisms in these reward-processing brain regions (e.g., the nucleus accumbens) less than brands with which people have weaker associations. I therefore recommend that marketers use sensory stimuli to evoke emotionally powerful memories (for example, colourful and retro packaging).

## **Consumer Preferences and Sensory Perception**

This study conduct in-depth interviews to 30 participants and explicated how sensory perception (taste, aroma and package) influence consumer behaviour. Subjects rated the degree that each sensory descriptor was important in their decisions on a 5-point Likert scale where:1 = Not Important; 2= Less Not Important;3 Neutral, or Indifferent);4 = Slightly Important and 5 VeryImportant.

	Brand	Awareness	Brand	Perception	Purchase	Intent
Marketing Channel	(%)		(Mean)		(%)	
Television						
advertising	75		4.2		38	
Social media						
marketing	82		4.5		42	
In-store promotions	68		4.1		35	
Influencer						
marketing	70		4.3		37	

 Table 4.3.Table indicating Impact of IMC Channels on Brand Awareness, Perception &

 Purchase Intent

### Inference:

The mean of flavor intensity is the first highest (4.8) and aroma which followed from sensory attributes that effected on consumer intentions when choosing blended spice product with means was 4,5). This underscores the significance of marketing efforts focused on creating these value perceptions via sensory-induced packaging, advertising and promotions.

**Regression Analysis: IMC Channels and Consumer Behaviour** 

The survey has been done whether brands engaging comprehensive strategies flourished more than fragmented approaches in promoting their brand. Various marketing channels were investigated for their influence on awareness, perception, prospective behaviour—including informative advertisements, engaging social campaigns, memorable in-store events partnering with influencers.

Independent Variable	Brand Awareness ( $\beta$ )	Brand Perception ( $\beta$ )	Purchase Intent ( $\beta$ )
TV advertising	0.32	0.25	0.28
Social media			
Advertisement	0.45	0.38	0.42
In-store marketing	0.27	0.22	0.25
Influencer promotion	0.35	0.3	0.33

 Table 4.4.Table indicating Regression Analysis Results

## Inference:

Decisively, social media strongly shaped brand awareness and positively impacted intention to buy, especially younger groups now making choices increasingly through digital interactions and recommendations within networks. As consumers continue migrating online in their decision journeys, a cohesive multi-pronged communication approach has become pivotal for successfully connecting with audiences across avenues.

## **Customer Segmentation**

Consumers were segmented into clusters based on sensory preferences and responses to marketing stimuli using cluster analysis. It breaks down as follows, in three different segments: **Sensory Seekers-** This group will have a high need for new and complex flavors, an appreciation of the experience from the sensory side (sound, texture) and respond well to marketing messages about experiencing with their senses.

**Traditionalists:** Consumers in this segment like traditional Indian Flavors, have a deep connect with the cultural heritage and are more likely to respond favorably on promotional stimuli that relate back to nostalgia and tradition.

**Habitualizers:** These represent consumers who value convenience and attributes that make their life easier, are price sensitive while being ready

## Table 4.5. Table indicating Consumer segment based on sensory preferences and responses to marketing stimuli

Segment	Size (%)	Primary Sensory Preference	Most Effective IMC Channel	
		Strong flavours, unique	Social Media,	
Sensory Seekers	35%	aromas	Influencer Marketing	
Traditionalists	40%	Familiar, nostalgic flavours	Television Advertising,	
Traditionalists	4070	Fammar, nostargie navours	Print	
Convenience-				
Oriented	25%	Ease of use, value-for-money	In-store Promotions	
Consumers				

### Inference:

All Sensory Seekers (35%): The largest consumer segment by a majority are most receptive to sensory driven marketing like influencers talking about using blended spices in their food. By contrast, Traditionalists (40%) are more heavily influenced by nostalgia-driven marketing and in turn, television ads as well print media work especially effectively on this group.

## **V. CONCLUSION**

At its core, this investigation acknowledges that purchasing choices in the Seasonings and Blends aisle are guided as considerably by sentiments as by rationale. When exploring the myriad options, one's tangible experiences of eating—distinct flavors, evocative aromas, pleasing textures, and even appealing visual presentations—greatly influence perceptions. Interacting with a blended seasoning isn't just reacting to its real qualities but also being swayed by the emotional connections and remembrances it evokes. This really is where neuromarketing proves invaluable, delving deeper into how the brain analyzes sensory stimuli to aid comprehension of the unconscious aspects that drive consumer tendencies and judgments. Blended seasonings offer nostalgia for some yet intrigue for others, transporting people through scents evoking fond recollections from the past or stimulating visions of enticing global cuisines yet undiscovered. Shoppers select products tied to sentiments meaningful to them, whether comforting memories of childhood or imaginings of exotic locales experienced solely in daydreams.

### Neuromarketing: A Game-Changer in Brand Strategy

A notable conclusion from this investigation is the varied influence of sensory stimuli on consumer perceptions, particularly when adeptly included into the packaging and presentation of the image.

The fMRI information uncover that bundling plans with brilliant hues and conventional Indian topics incited more grounded enthusiastic reactions in the cerebrum, particularly in the nucleus accumbens, which is related with reward and pleasure. These plans not just appealed to the consumer's senses yet in addition tapped into social nostalgia, making the image more identifiable and reliable.

This is particularly huge inside the setting of the Indian commercial center, where sustenance is profoundly weaved with social and enthusiastic traditions. Blending Flavors, for numerous Indian shoppers, speak to not simply taste yet a connection to their legacy, family conventions, and recollections of home. Neuromarketing permits images to take advantage of this by adjusting their showcasing efforts with the sensory and enthusiastic triggers that resonate most with their intended interest group. By doing this, images can foster more profound enthusiastic commitment, which thusly drives image loyalty and repeated buys.

For instance, the high nerve enactment in reaction to conventional Indian bundling plans proposes that images ought not stray too far from social indications in their showcasing endeavours. While cutting edge minimalistic plans may engage more youthful, more worldwide crowds, information demonstrate that brilliant, socially resonant plans produce a more grounded enthusiastic reaction, driving to higher image preference and purchase aim.

## IMC: Crafting a Unified Consumer Experience

While neuromarketing sheds light on implicit preferences, integrated marketing communications illustrates how harmonious messages may traverse platforms. Regression

Principal findings involve digital channels' rising importance, as social media and influencers impact trends. Social platforms have undoubtedly moulded the perceptions of younger, tech-savvy cohorts, which comes as little surprise considering their ability to facilitate discussion as traditional media struggles to replicate online communities. Immersive, interactive elements like videos, recipes and reviews across Instagram, Facebook and YouTube engage crowds in profoundly impactful ways.

The roles of influencers cannot be overstated. Regarding Indian spice blends, the views of cooking experts or homemakers with sizable followers have the potential to be sharply contoured. By demonstrating both everyday uses and cultural significance, they form connections between products and lived experiences. Integrated advertising across online and television platforms, consistent messaging from influencers resonates throughout various touchpoints.

Interestingly, while television retains a certain awarenes-building strength, younger demographics appear increasingly disengaged. This implies the need for nuanced, multipronged strategies to maintain resonance across diverse audiences. Nostalgia may compel older viewers to respond positively to television commercials, for instance, whereas brands could more effectively engage younger crowds through social media campaigns and influencer endorsements.

### **Consumer Segmentation and Tailored Marketing**

If you cannot deliver just one or two solutions, try conducting consumer segmentation and marketing to the right customer segment.

Of note, this study classified respondents in terms of their sensory preferences and marketing behavior. Results Cluster analysis identified three distinct consumer groups: Sensory Adventurers, Tradition Bearers and Comfortability Concentrators. All responded differently requiring personalized approaches.

**Flavorful Adventurers** (about 32 percent of the market), who love intense, unique flavors and getting sensory input by consuming — responded to ads that talked up things like bold flavor, complex scents or luminous colors. Because we found them to be influenced by the visual and experiential elements of content, social media marketing and influencer partnerships emerged strongly among this cohort.

The two-fifths of the market made up by **Tradition** Bearers were drawn to familiar tastes that brought back childhood memories and showcased cultural heritage. Television Commercials, print media and in-store promos that tapped into feelings of family history & heritage resonated the most consistently with this division built upon sameness and tradition.

**PRICE, VALUE Oriented** Shoppers opted for the easy way (one-fourth of it) Marketing on this collection should have emphasized things like convenience, clever packaging, and affordability. In-store developments and direct-to-client selling that emphasized utility drew attention.

This allowed the brands to create bespoke marketing focusing on unique needs and desires of each individual consumer profile. These segments were further divided-based, so the resources used for this segmentation boosted yielded in better results of integrated marketing communication strategies.

### **Impact on Blended Spices Industry**

As if the compounded nature of India's fragmented blended spices and seasoning space were not complex enough, this vast canvas stands at a unique crossroads as ancient traditions meet present-day needs right up to consumer dynamics that grow in shades nuanced like never before. This study has an important guiding role for any brand operating in this twisted universe:

1) Emotional Engagement is everything: The most physical and tactile of experiences, taste sensations are deeply intertwined with emotion in the world of food —and companies that can spark this relationship best have the greatest chance to thrive. These sensory stimuli—from the design of packaging and flavor intensity to aroma—activate emotional responses, dictating consumer behaviour, can be mapped by neuroscience. Brands need to develop sensorial tactics which elicit positive emotional connections — but in a sophisticated and subtle way.

**2) Brand Consistency Across Channels:** Integrated marketing helps all channels to deliver a unified brand message, irrespective of the channel. This could be done through social media networks, on television ads or in store promotions and even by using influencer advertising, but the main thing is to keep a consistent message. It also builds consistency in the message, thereby incentivizing there to become a trust-line between who this brand is and what it represents; making bonds that consumers can have with brands complicated but long lasting.

**3) Digital and Social are Boon** – With people turning to digital mediums for product discovery and engagement, brand can't live without ground presence of robust e-marketing strategies. These young consumers are particularly responsive to social media and influencer advertising which provides a huge potential for brand awareness since they value authenticity, the personal relations with brands that they endorse. Nevertheless, brands should consider following some traditional avenues such as television and print especially with fashion-conscious segments demand for which is not dying out completely.

**4)** Segmenting the consumer groups: It is very important for brands to get their heads into properly segmenting different sectors of consumers and catering them with what it takes well, be relevant. In a multi-dimensional market, an appealable taste of the sensory-driven consumer will result better than one-sided strategy irrespective of making it for convenience oriented shopper as well.

### **Future Directions & Research Scope:**

Future work can further investigate phenomenon by looking into neuromarketing in addition to integrated marketing communications across different aspects of the food industry and other domains. The digital age is changing consumer habits, so what themes may be open to examination in the future?

Because of this, cultural differences are important to analyze for two reasons. Take into consideration the subtleties of varied regions in India — honour local tastes, traditions and mores. Furthermore, there is a need for research on how applicable the results are beyond India into other cultural areas with comparable gastronomic traditions.Sustained impact longitudinally deserves attention. Future research should investigate the extent to which cognitive dissonance may have long-term impacts on brand equity and customer loyalty. This can include how consumer behavior has changed over time, what the frequency of people buying is now like, whether or not they start switching around which brand to buy more

frequently and if you are hearing about new products through word-of-mouth recommendations from other users.

Emerging technologies are ripe for exploration. Artificial intelligence and machine learning's potential to enhance neuromarketing approaches and customize integrated marketing communications warrants examination. Augmented and virtual reality's immersive experiences, especially regarding food and drinks, are worth scrutinizing. Neurofeedback methods' ability to quantify and manipulate brain activity responding to marketing while providing precise consumer preference insights requires study.

Ethical matters necessitate consideration. Issues surrounding data collection and application in neuromarketing research regarding privacy and security demand addressal. Ensuring findings are applied ethically and avoid manipulation or deception is crucial to responsible marketing.Delving deeper into these areas can foster a more complete understanding of neuromarketing and integrated marketing communications' role in shaping consumer behavior and driving brand success in food and beyond.

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