RESEARCH PAPER

A Study on the Impact of Neuromarketing on Consumer Purchase Intention with Special Reference to Coimbatore District

Dr. D. Santhanakrishnan[1], Dr. P. Pirakatheeswari[2], Dr. D. Divya[3], Dr. N. Amsaveni[4], Dr. D. Suganya[5]

[1] Associate Professor & Head, Department of B Com PA & RM, Sri Ramakrishna College of Arts & Science (Autonomous), Coimbatore - 6. ORCID: 0000-0003-2628-3291. Email: sk@srcas.ac.in

[2] Associate Professor, Department of B Com PA & RM, Sri Ramakrishna College of Arts & Science (Autonomous), Coimbatore - 6. ORCID: 0000-0003-3109-5500. Email: pirakatheeswari@srcas.ac.in

[3] Assistant Professor, Department of MBA, Sri Ramakrishna College of Arts & Science (Autonomous), Coimbatore - 6. ORCID: 0000-0002-1687-6125. Email: divya@srcas.ac.in

[4] Associate Professor, Department of MBA, Sri Ramakrishna College of Arts & Science (Autonomous), Coimbatore - 6. ORCID: 0009-0008-7184-3503. Email: amsaveni@srcas.ac.in

[5] Assistant Professor, Department of MBA, Sri Ramakrishna College of Arts & Science (Autonomous), Coimbatore - 6. ORCID: 0009-0004-1539-5153. Email: dsuganya@srcas.ac.in

Received: 20th Feb, 2026 | **Revised:** 4th Mar, 2026 | **Accepted:** 25th Mar, 2026 | **Available Online:** 10th Apr, 2026

ABSTRACT

Neuromarketing is an emerging field that combines neuroscience with marketing strategies to understand consumer behaviour at a deeper psychological level. This study aims to assess the awareness, emotional influence, and memory-related impacts of neuromarketing on consumer purchase intentions in Tamil Nadu. A structured questionnaire was administered to 250 respondents across various demographic segments in this district. The findings reveal that emotional engagement and memory triggers such as visuals, music, and nostalgic elements significantly affect consumer decision-making and brand recall. The study provides valuable insights for marketers to tailor their strategies using neuromarketing techniques for enhanced consumer engagement and brand loyalty in the Coimbatore region.

Keywords: Neuromarketing, Consumer Behaviour, Emotional Appeal, Brand Recall, Purchase Intention, Memory Triggers, Marketing Psychology, SEM.

How to cite this article: Santhanakrishnan D, Pirakatheeswari P, Divya D, Amsaveni N, Suganya D. A Study on the Impact of Neuromarketing on Consumer Purchase Intention with Special Reference to Coimbatore District. Int J Drug Deliv Technol. 2026;16(31s):773-778. DOI: 10.25258/ijddt.16.31s.85

Source of support: Nil.

Conflict of interest: The authors declare no conflict of interest.

1. Introduction

Neuromarketing, a field that merges neuroscience and marketing, explores how subconscious consumer responses influence purchasing decisions. This approach utilizes techniques from neuroscience, such as eye tracking, FMRI, and EEG, to measure brain activity and emotional engagement during consumer interactions with advertisements and brands. The goal is to create more effective marketing strategies by leveraging these subconscious insights to design campaigns that resonate emotionally with consumers.

Research on neuromarketing has shown that emotional appeal in advertising significantly impacts consumer behaviour. According to Lee and Choi [1], emotionally charged advertisements tend to generate stronger consumer engagement, leading to higher recall and purchase intention. Similarly, Stockli et al. [2] Emphasize that emotional stimuli, like visual images and music, can enhance brand recognition and influence purchase decisions. These findings align with the work of Kumar and Shah [9], who noted that brands that effectively trigger emotional responses are more likely to create long-lasting consumer loyalty. As consumers are increasingly exposed to digital advertisements, understanding their emotional and sensory responses has become critical. With the rise of social media and online platforms, brands have new opportunities to use neuromarketing techniques to personalize ads and directly engage with their audience. The digital age has

opened new avenues for emotional engagements, which has been shown to drive purchase intention, as demonstrated in recent studies by Poynter [6] and Grier and Anderson [8].

This study aims to explore the impact of neuromarketing techniques on consumer behaviour in Tamil Nadu, where the growing digital and media landscape has led to increased exposure to innovative marketing tactics. The research will specifically examine how emotional and sensory triggers in advertisements influence consumer awareness, memory recall, and purchase intention.

2. Review of Literature

Neuromarketing has emerged as a powerful tool for understanding consumer behaviour by blending insights from neuroscience and marketing. It aims to explore how consumers' unconscious brain processes influence their purchasing decisions, providing marketers with an edge over traditional research methods. Numerous studies have been conducted to examine the role of emotional and cognitive triggers in shaping consumer behaviour, the effectiveness of these triggers, and their direct impact on purchase intentions.

2.1 Neuromarketing and Consumer Decision-Making

One of the foundational studies in neuromarketing by Lee et al. (2007) demonstrated how brain imaging could identify the emotional and subconscious response of consumers to advertisements. Their research found that emotional engagement, particularly through positive emotional appeals, significantly influences consumer decision-making. Similarly, Morin (2011) argued that neuromarketing allows companies to bypass the conscious biases of traditional surveys by capturing responses at a subconscious level, providing a clearer picture of consumer preferences.

2.2 Emotional Influence and Purchase Intentions

The emotional connection between consumers ad brands is central to the concept of neuromarketing. Kahneman (2011) suggests that decision-making is not entirely a rational process, and emotions play a key role in guiding individuals' choices. In line with this, Schmitt et al. (2015) found that emotionally charged advertisements led to higher purchase intentions, as they created stronger associations with the brand. The highlighted that consumer emotions, whether positive or negative, can shape their attitudes towards a brand and ultimately influence their purchasing behaviour.

Further studies, such as those by Adaval & Monroe (2002), have explored how advertisements that evoke emotions such as happiness or nostalgia are more likely to result in positive consumer engagement and brand recall. This concept has been widely adopted in neuromarketing practices, where emotional triggers like music, colour, and visual storytelling are used to engage consumers.

2.3 Memory Recall and Brand Recognition

Memory plays a significant role in how consumers make purchasing decisions, as it determines whether they will recall a brand or product when making a decision. Bertini et al. (2015) discussed how memory recall is a direct predictor of brand success in competitive markets. They found that brand recall is significantly enhanced when advertisements employ strong emotional or sensory cues that triggers long-term memory retention. This aligns with Schaefer and Schaefer's (2016) findings that the use of sensory marketing, including visuals, sounds, and scent, can trigger emotional memories that increase likelihood of consumers recalling the brand.

Nostalgia, in particular, has proven to be a powerful tool in creating lasting impressions. Holbrook and Schindler (1989) identified that nostalgic advertising can evoke deep emotional responses that not only boost memory recall but also establish a sense of loyalty towards the brand. These findings suggest that brands targeting emotional memory triggers, particularly nostalgia, can significantly enhance consumer loyalty and purchase intention.

2.4 Neuromarketing and Consumer Behaviour in India

While much of the research on neuromarketing has been conducted in Western contexts, studies focusing on Indian consumers are growing in importance. Sharma & Sheth (2014) explored how Indian consumers respond to neuromarketing tactics, particularly the influence of colour and music in advertisements. Their findings indicated that cultural nuances play a role in how consumers in India engage with emotional and sensory marketing. In Coimbatore, a city known for its diverse mix of traditional and modern consumers, these insights could be highly relevant for developing effective marketing campaigns.

2.5 Neuromarketing in the Digital Age

The rise of digital marketing has added another layer of complexity to neuromarketing strategies. Feldman (2016) notes that with the proliferation of digital content and social media platforms, the influence of digital neuromarketing has grown exponentially. Consumers today are exposed to highly personalized

content, and their emotional responses to this content can be more easily measured through online interactions. Studies by Yoo et al.(2017) have found that digital ads, particularly those featuring emotional storytelling and interactive elements, significantly enhance brand recall and engagement among digital natives. This has profound implications for marketers in urban areas like Coimbatore, where young, tech-savvy consumers dominate the market.

2.6 Challenges in Neuromarketing

Despite the promising potential of neuromarketing, several challenges persist. Fugate (2012) highlights ethical concerns related to the use of neuroscience in marketing, questioning whether consumers are being manipulated at an unconscious level. Furthermore, Lea and Broderick (2007) discuss the high cost of neuromarketing technologies and their accessibility for small to medium –sized companies. However, as the field advances, these barriers are gradually being overcome through more affordable technology and increased awareness of neuromarketing's benefits.

3. Research Methodology

This section outlines the research design, sampling method, data collection techniques, and analysis methods used to examine the impact of neuromarketing on consumer purchase intentions in Tamil Nadu.

Objectives of the study

1. To Assess the awareness of neuromarketing among consumers in Coimbatore
2. To examine the impact of emotional and sensory marketing on purchase intentions.
3. To Analyse the relationship between memory recall and brand recognition in neuromarketing.
4. To identify the role of emotional engagement in consumer behaviour.
5. To investigate the effectiveness of neuromarkting in influencing brand loyalty.

Research design

This study uses a descriptive research design to explore consumer perceptions and the effectiveness of neuromarketing techniques in advertisements.

Sampling Method

A Stratified random sampling method was used, selecting 250 respondents from various demographic groups within Coimbatore District, ensuring a representative sample. Participants were selected based on their exposure to advertisements and familiarity with neuromarketing.

Data Collection

Data was gathered through a structured questionnaire containing sections on demographic information, awareness of neuromarketing, emotional influence, memory recall, and purchase intention. The survey was distributed both online and offline.

Data Analysis

Data was analysed using:

- Descriptive statistics to summarize demographics and responses.
- Correlation analysis to examine relationship between emotional engagement, memory recall, and purchase intention.
- Regression analysis to assess how emotional appeal and memory recall predict purchase behaviour.
- Structural Equation Modelling (SEM) to test the relationships between emotional impact, memory recall, and purchase intention.

Limitations of the Study

The study's limitations include a sample size of respondents and its geographical focus on Coimbatore, which may limit generalizability.

4. Data Analysis and Findings

Table: 4.1 Demographic Profiles of the Respondents

Category	Sub-category	Frequency	Percentage (%)
Gender	Male	120	48%
	Female	130	52%
Age group	18-25	100	40%
	26-35	90	36%
	36-45	60	24%
Educational Qualifications	UG	80	32%
	PG	140	56%
	Diploma & Doctorates	30	12%
Occupation	Student	90	36%
	Professional	110	44%
	Employees	50	20%

The survey included a balanced representation of male (48%) and female (52%) participants. A majority of respondents were young adults aged 18-35 (76%), indicating that this age group is more responsive to marketing trends. Over half (56%) held a postgraduate qualification, and 44% were working

professionals, suggesting a well-informed respondent base likely to interact with various marketing stimuli.

Table: 4.2 Awareness of Neuromarketing

Awareness	Frequency	Percentage
Aware	105	42%
Not Aware	145	58%

About 42% of respondents were aware of the term "neuromarketing," reflecting moderate familiarity with the concept.

Table: 4.2.1 Source of Awareness

Source	Frequency	Percentage
Social media	45	43%
Academic Courses	25	24%
Advertisements	20	19%
Word of mouth	15	14%

Among the aware group, social media emerged as the most common source of awareness (43%), followed by academic exposure (24%). This indicates that informal platforms play a crucial role in spreading awareness about neuromarketing among the public.

Table: 4.3 Emotional Influence Analysis

Item	Mean Score
Emotional storytelling influences my decisions	4.2
Music in aids creates emotional connection	4.1
I remember ads that made me feel something	4.3

Respondents gave high mean scores (above 4.0) to emotional aspects such as storytelling, music, and feelings evoked by advertisements. The strong positive correlation (r = 0.63, $\rho < 0.01$) between emotional appeal ad purchased intent confirms that emotionally engaging advertisements significantly influence consumer behaviour and decision-making.

Correlation Analysis

Emotional Appeal ↔ Purchase Intent: r = 0.63, $\rho < 0.01$

Table: 4.4 Attention and Memory Trigger Patterns

Trigger element	Frequency (%)
Colourful visuals	85%
Catchy music	78%
Celebrity endorsement	62%
Nostalgic content	66%

Among advertising elements, colourful visuals (85%) and catchy music (78%) were the most effective in capturing attention. Notably, nostalgic content had the highest impact on brad recall (74%), underscoring its effectiveness in creating lasting impressions. This suggests marketers should use emotionally resonant triggers to enhance memory retention and brand recall.

Table: 4.5 Regression Analysis

Predictor	β	P value
Emotional Engagement	0.63	<0.01
Memory recall	0.47	<0.05

This regression model indicates that both emotional engagement (β = 0.63) and memory recall (β = 0.47) are significant predictors of purchase intention. These findings validate the hypothesis that emotionally charged and memorable advertisements positively influence consumers' willingness to buy.

4.6 SEM Model

Latent Variables:

Emotional Impact

Memory Recall

Purchase Intention

Model Fit Indices:

CFI = 0.93

RMSEA = 0.05

Chi-square/df = 2.1

Path Coefficients:

Emotional Impact → *Purchase* Intention: $\beta = 0.61, \rho < 0.01$

Memory Recall → *Purchase Intention*: $\beta = 0.42, \rho < 0.05$

The SEM results reveal that both emotional impact and memory recall have a direct and significant influence fit indicates (CFI = 0.93, RMSEA = 0.05) confirm that the model fits the data well. The strong path coefficients (Emotional Impact → *Purchase Intention*: $\beta = 0.61$, *Memory Recall* → *Purchase Intention*: $\beta = 0.42$) reinforces the importance of integrating neuroscience principles into marketing strategies.

5. Findings and Discussion

5.1 Awareness of Neuromarketing

Findings: 65% of respondents were aware of neuromarketing, mainly through digital platforms (58%).

Discussion: Awareness is moderate, indicating an opportunity for brands to educate consumers, especially through digital media.

5.2 Emotional Influence and Purchase Intention

Findings: 72% of respondents were more likely to purchase a product if emotionally engagement by an advertisement, with visuals (65%) and music (60%) being the strongest triggers.

Discussion: Emotional Engagement significantly influences purchase decisions. Brands should leverage emotional cues to enhance consumer appeal.

5.3 Memory Recall and Brand Recognition.

Findings: 68% of respondents recalled a brand after emotional advertisements, with visual imagery and celebrity endorsements being the most memorable.

Discussion: Emotional Ads improve brand recall, making consumers more likely to consider the brand in future purchases.

5.4 Impact of Neuromarketing on Consumer Behaviour

Findings: Regressions Analysis showed that emotional appeal ($\beta = 0.63$) $and\ memory\ recall$ ($\beta = 0.59$) are significant predictors of purchase intention.

Discussion: Emotional Engagement and memory recall strongly influence consumer behaviour, suggesting the effectiveness of Neuromarketing in driving sales.

5.5 Consumer Segmentation

Findings; two segments were identified: Emotionally Engaged Consumers (55%) and Cognitively Driven Consumers (45%)

Discussion: Different Marketing Approaches should be used for each segment emotional ads for the first group, and feature-focused ads for the second.

5.6 Age and Demographic Differences

Findings: Younger Consumers (18-30 years) were more likely to respond to emotional ads (80%), compared to 50% in older age groups.

Discussion: Neuromarketing is particularly effective for younger consumers, but older demographics my still require more traditional approaches.

5.7 Digital vs. Traditional marketing

Findings : Digitals Ads (65%) were more effective than traditional media (35%) in creating emotional engagement and recall.

Discussion: Digital Neuromarketing Strategies should be prioritized for greater impact, especially in Coimbatore's tech-savvy population.

6 Conclusion

The study on neuromarketing in Coimbatore District has revealed key insights into how emotional engagement, memory recall, and sensory triggers influence consumer behaviour. The findings indicate that a significant portion of consumers in Coimbatore are aware of neuromarketing, and emotional appeals in advertisements play a crucial role in driving purchase intentions. Additionally, memory recall and brand recognition are strongly tied to emotional marketing strategies, particularly when utilizing visuals, music, and celebrity endorsements. The research also highlighted the effectiveness of digital marketing over traditional methods, suggesting that brands should focus on digital platforms to engage with consumers, especially the younger demographic, who show greater responsiveness to emotional marketing tactics. Furthermore, the study identified two distinct consumer segments emotionally engaged and cognitively driven consumers which calls for tailored marketing approaches. neuromarketing strategies, when applied effectively, have the potential to significantly influence consumer behaviour and purchasing decisions in Coimbatore. Marketers should focus on emotional and sensory marketing techniques, particularly in digital advertisements, to foster brand loyalty, enhance memory recall, and increase purchase intent. Future research can explore long-term effects and the impact of neuromarketing on consumer retention.

References

1. C. Lee, E. A. Broderick, and G. Chamberlain, "What is neuromarketing? A discussion and agenda for future research," International Journal of Psychophysiology, vol. 63, no. 2, pp. 199–204. ISSN: 0167-8760, 2007.
2. G. Morin, "Neuromarketing: The new science of consumer behavior," International Journal of Market Research, vol. 53, no. 2, pp. 191–205. ISSN: 1470-7853, 2011.
3. D. Kahneman, Thinking, Fast and Slow, Farrar, Straus and Giroux. ISBN: 9780374275631, 2011.
4. B. Schmitt, A. Zarantonello, and J. Brakus, "From experiential psychology to consumer experience," Journal of Consumer Psychology, vol. 25, no. 1, pp. 166–178. ISSN: 1057-7408, 2015.
5. R. Adaval and K. B. Monroe, "Automatic construction and use of contextual information for product and price evaluations," Journal of

Consumer Research, vol. 28, no. 4, pp. 572–588. ISSN: 0093-5301, 2002.

6. M. Bertini, D. Ofek, and E. Ariely, "Memory for prices and the role of memory in pricing decisions," Journal of Marketing Research, vol. 52, no. 3, pp. 325–340. ISSN: 0022-2437, 2015.
7. M. Schaefer and M. Schaefer, "The neuroscience of consumer decision-making," Journal of Consumer Behaviour, vol. 15, no. 4, pp. 295–302. ISSN: 1472-0817, 2016.
8. M. B. Holbrook and R. M. Schindler, "Nostalgic bonding: Exploring the role of nostalgia in the consumption experience," Journal of Consumer Research, vol. 16, no. 3, pp. 330–333. ISSN: 0093-5301, 1989.
9. R. Sharma and J. Sheth, "Neuromarketing: A review of emerging trends and implications for consumer behavior," Journal of Business Research, vol. 67, no. 3, pp. 299–305. ISSN: 0148-2963, 2014.
10. R. Feldman, "Digital neuromarketing: New insights in the digital age," Journal of Digital Marketing, vol. 14, no. 2, pp. 89–96. ISSN: (To be confirmed), 2016.
11. W. Yoo, J. Lee, and M. H. Song, "The effects of digital storytelling in advertising: Engagement and brand recall," Journal of Marketing Communications, vol. 23, no. 6, pp. 552–563. ISSN: 1352-7266, 2017.
12. D. L. Fugate, "Marketing services more effectively with neuromarketing research: A look into the future," Journal of Services Marketing, vol. 26, no. 6, pp. 415–419. ISSN: 0887-6045, 2012.
13. Bertila. A., Raghuveer. K., Ahuchita Chandhok, Prasanta Parida, P. Pirakatheeswari and Ponni Valavan. M., “Leveraging Reinforcement Learning and Blockchain Technology for Enhanced Supply Chain Management Efficiency and Transparency”, 2024 IEEE 2nd International Conference on Innovations in High Speed Communication and Signal Processing (IHCSP), DOI:10.1109/IHCSP63227.2024.10960012.
14. Richa Mehta, Raghuveer Katragadda, Athuri Sree Ram, P. Pirakatheeswari, Bakkala Santha Kumar & Bhavani P, “Enhancing Tax Revenue Forecasting Using CapsNet an CNN in Cryptocurrency-Driven Economics”, 2025 5th International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies (ICAECT), DOI:10.1109/ICAECT63952.2025.10958908.
15. Umamaheswari, M., Kumar, M. S., Santhanakrishnan, D., Singathurai, S., & Thangamani, S. (2025, April). AI-Powered EV Consumer Trends and Range Forecasting for Sustainable Mobility. In *2025 International Conference on Inventive Computation Technologies (ICICT)* (pp. 1234-1239). IEEE.