

Original Research

Received 09 April 2026

Revised 12 May 2026

Accepted 15 June 2026

Natural Resources for Human Health 2026, Vol. 6 (3s): 93–101

KEYWORDS:

Artificial Intelligence, Social Media Marketing, Cosmetic Consumption, Purchase Intention, Consumer Behavior.

Adoption of AI-Driven Social Media Marketing Tools and Their Influence on Cosmetic Consumption of Women in Chennai

¹Mrs.S. M. Anitha, ²Dr. K. Selvi

¹Research Scholar, Department of Commerce B.S. Abdur Rahman Crescent Institute of Science and Technology

Email: anitha_comm_july25@crescent.education, Ph.no: 9176173653

²Research Supervisor, Department of Commerce B.S. Abdur Rahman Crescent Institute of Science and Technology

Email: selvi.com@crescent.education, Ph.no:9944335191

ABSTRACT: An AI marketing tool is an application or a platform that uses AI technology to improve marketing activities and make data-driven decisions. AI-driven tools such as personalized advertisements, Chatbots, recommendation algorithms, and influencer analytics are highly shaping the way consumers discover and purchase cosmetic products. These tools control AI algorithms, natural language processing, machine learning, and data analytics to automate processes, analyze data, and provide insights to enhance cosmetic marketing strategies and campaigns. This study explores how AI-powered social media marketing tools influence the cosmetic consumption patterns of women in Chennai. The data collected from women across different age groups in Chennai; the study analyzes the relationship between exposure to AI-driven marketing strategies and changes in buying behavior. The research also examines various factors such as Awareness & adoption of AI-driven social media marketing, AI-personalization & consumer engagement, Influence on purchase intention & consumption behavior, Brand-wise perception of AI-driven cosmetic marketing, trust and satisfaction. The study indicates that the brand Lakme, by its active usage of AI-powered marketing tools on social media platforms, plays a major role in purchase decisions and holds strong consumer trust and loyalty. The study also indicates that platforms such as Instagram with AI-based marketing play an important role in shaping the young consumer's buying behavior, especially when the content is relatable, affordable and trustworthy.

INTRODUCTION:

Traditional cosmetic advertising depends on TV commercials, fashion magazines, celebrity endorsements, in store beauty counters, and billboards. Popular brands like L'Oréal, Maybelline attracted their targeted audience through glamorous campaigns. The impact of Traditional Cosmetic Advertising is to build aspirational beauty standards, create strong brand prestige, reach mass female audiences and influence buying intention through celebrities. The modern consumers want shade accuracy, skin type specific skincare products. AI marketing feeds data back into product creation through trending ingredients, shade demand, skin concerns by region and customer complaints so personalization is lacking in Traditional advertising. AI transformed cosmetic marketing into more interactive and personalized such as Virtual Try-ons, AI Skin analysis, and personalized product recommendations. The buyers trust on influencers, reviews, before and after content where peer-level authenticity lacks in Traditional Tv Ads. AI allows Micro-targeted ads, Retargeting cart abandoners, performance-based budgeting but traditional advertising requires massive upfront spending without guaranteed conversions. However, traditional advertising still supports brand awareness, while AI-driven marketing dominates conversion and personalization.

The following are the cosmetic brands which are using AI-driven social media marketing tools such as AI & AR Tools for personalization, Virtual try-on & shade finder, Data focused digital marketing, digital engagement techniques:

L'Oréal- Founded in 1909 by Eugène Schueller in France, L'Oréal started with hair dyes and raised into the world's largest beauty company. L'Oreal India is the Indian branch of L'Oreal; they have a broad portfolio that includes mass-market favourites like L'Oreal Paris, Garnier, Maybelline NewYork and NYX professional makeup. L'Oreal India use ingredient storytelling, clinical claim explainers, and expert-endorsed formats to build credibility on social media.

Maybelline- Founded in 1915 and L'Oreal is the parent company of Maybelline. Maybelline has a wide range of products with affordable prices. Maybelline's digital strategy leans heavily on influencer collaborations, viral makeup challenges, and empowerment-led campaigns — making it one of the most socially engaged mass beauty brands globally.

Lakme- Launched in 1952, Lakme is the one of the most trusted beauty brands in India, bringing a very broad portfolio, including makeup products, suitable to Indian skin tone and climate. Lakmé's integration of AR try-on technology where digital discovery seamlessly translates to in-store purchase, supported by influencer content that drives both online and offline traffic.

MAC Cosmetics- MAC (Make-up Art Cosmetics) founded in Toronto in 1984. The company's products were intended for makeup professionals, but are sold directly to consumers worldwide. AI-driven shade recommendation content and skin-tone inclusive tutorials drive high engagement and purchase intent.

Nykaa- Nykaa is one of India's fastest growing beauty and cosmetic companies, user- friendly online platform, fast delivery and easy return policy. The company has launched its own reputable brands like Nykaa cosmetics, Kay Beauty and Dot & Key. AI can power personalized product recommendations and routine-building content at scale. Content-driven YouTube strategy educating consumers and driving measurable purchase intent through tutorial-to-cart journeys.

Sugar Cosmetics- Founded in 2015 by Vineeta Singh and Kaushik Mukherjee, SUGAR Cosmetics built for bold, independent Indian women. The brand is cruelty-free and has expanded to 450+ products across colour cosmetics, skincare, and tools — sold via its own app, website, and retail partners. SUGAR built a massive, loyal community rather than just relying on top-down celebrity advertising. By engaging directly with real users and micro-influencers, through AI Content Strategies such as Product Performance Stories, Attitude-Led Storytelling that resonates strongly with urban millennial and Gen Z consumers.

Mamaearth- Mamaearth has become one of India's most recognised skincare brands by combining approachable messaging with ingredient-led communication to their target audience. Mamaearth identifies the skin problem and suggests the correct cosmetic product and users upload proof as storytelling this strategy works very well. Mamaearth markets their product by generating customized routine content based on skin concerns and demographics.

Plum- Dermatology-led formulations and open ingredient communication are the foundation of Plum. The brand educates consumers on what is in their products and why it works, this helps to builds long-term trust and loyalty among ingredient-savvy Indian consumers. Plum is cruelty-free and 100% vegan, further strengthening its appeal among conscious beauty buyers. Artificial Intelligence-personalized content that routes users to products matched to their specific skin type — oily, dry, combination, sensitive — driving relevance and conversion.

Minimalist- Minimalist known for single-ingredient hero products (niacinamide, retinol, AHA/BHA), Minimalist appeals to informed consumers about their product ingredients. Content thrives on “ingredient education” formats and before/after proof points.

WOW Skin Science- WOW Skin Science is a Bengaluru based beauty and personal care products trusted for our premium quality. WOW combines natural ingredients with affordable pricing, targeting a mass audience. Its marketing content is all about transformation stories, routine-building guides, and product comparison formats.

OBJECTIVES OF THE STUDY:

- To examine the level of awareness and adoption of AI-driven social media marketing tools among women cosmetic consumers in Chennai.
- To analyze the influence of AI-driven personalization and consumer engagement level on cosmetic products promoted through social media.
- To assess the impact of AI-driven social media marketing on purchase intention and cosmetic consumption behavior of

women in Chennai.

- To evaluate the role of AI-driven social media marketing in shaping Brand awareness, preference, trust, and satisfaction toward cosmetic brands among women consumers.

REVIEW OF LITERATURE:

Shadiya, M. S., & Chitra, S. (2025): The study investigates how factors such as influencer credibility, engagement levels, content authenticity, and brand collaborations influence consumer perceptions and purchasing decisions, the data collected from 500 Indian consumers and Content analysis done on 50 influencer posts. The study highlights that majority of the respondents have purchased a cosmetic product based on an influencer's recommendation, Micro-influencers (10k–100k followers) were found to have higher engagement rates than celebrity influencers and the factors such as Credibility, transparency, and engagement are key elements, and the study concludes that the Indian cosmetic industry is highly influenced by the Influencer marketing.”

Khawaja, A., Farooque, A., Sinha, S., Srivastava, A. K., & Nabeel, S. M. (2025): The study aims to identify the trends in social media patterns in cosmetic purchase and future emerging areas of scope, the sample of 513 articles were analyzed with a VOS Viewer software. The study highlights that by examining co-authorship, keyword co-occurrence and citation networks across authors, institutions and countries, the findings indicate a well-established and progressively expanding research domain shaped by active multidisciplinary collaboration.

Sharma, P., & Sisodiya, R. S. (2025): The researchers examine how the metaverse is changing marketing strategies and consumer behaviour, and investigates those immersive technologies such as VR, AR, AI, and blockchain are influencing brand engagement. The study depends on scholarly articles, academic studies, and industry reports. The authors conclude that the metaverse provides an exciting and transformative boundary for marketing; It enables hyper- personalized, immersive, and interactive consumer experiences. Sustainable growth requires addressing ethical, technological, and accessibility challenges. Businesses that strategically implement metaverse technologies will find the digital age of consumer engagement. **Sahar Raees, Syed Muddasir Hussain, & Zeeshan Malik (2025):** The research explores the impact of three factors namely Social Media Marketing, User Interface Design and Ease of Use on Customer purchase intention for cosmetic products. The study recommends the company to take necessary steps to enhance website functionality as well as social media promotional methods and design better interfaces that satisfy the consumer needs.

Sikdar, R. (2025): This study investigates how Social Media Influencers affect cosmetic choices among Kolkata's youth (16-24 years). The data collected from 200 respondents. The study identifies three key characteristics of influencers: authenticity, expertise, and information quality that helps to build trust with young consumers. The study concludes that trust plays an important role in influencer marketing which also helps to enhance brand visibility.

Sample Design:

Nature of Research – The research is exploratory in nature. Exploratory research is a type of research conducted to investigate a topic or problem that is not well studied or not fully understood.

Sample Technique – The sampling technique used in the research is purposive sampling

Sample Size – The sample size consists of 147 respondents.

Sources of Data – Both primary and secondary sources of data used for the research. Primary data: primary data collected from the females who are using AI cosmetics products.

Data Analysis and Interpretation:

Table 1: Demographic Profile:

Variables	Options	Frequencies	Percentage (%)
Age Group	Below 20 years	75	51.02%
	20–29 years	62	42.18%
	40–49 years	4	2.72%
	30 - 39 years	3	2.04%
	50 years and above	2	1.36%
	30- 39 years	1	0.68%
Marital Status	Single	122	82.99%
	Married	25	17.01%
Educational Qualification	Undergraduate	81	55.10%
	Postgraduate	30	20.41%
	Higher Secondary	26	17.69%
	Doctorate / Professional Degree	10	6.80%
Occupation	Student	112	76.19%
	Private Sector Employee	18	12.24%
	Self-employed / Entrepreneur	8	5.44%
	Government Employee	6	4.08%
	Homemaker	3	2.04%
Monthly Income (in ₹)	Below 20,000	106	72.11%
	20,001 – 40,000	17	11.56%
	Above 60,000	15	10.20%
	40,001 – 60,000	9	6.12%
Frequency of Purchase	Rarely	85	57.82%
	Monthly	32	21.77%
	Occasionally	25	17.01%
	Frequently	5	3.40%
Social Media Platform	Instagram	88	59.86%
	YouTube	48	32.65%

	Facebook	2	1.36%
	Snapchat	2	1.36%
	Other	7	4.76%

Source: Primary Data (N=147)

Table 1. Explains that, the majority of the respondents (51.02%) belong to the age group 20–29 years, the highest proportion of respondents (82.99%) are single, most of the respondents (55.10%) are Undergraduate, (76.19%) were students. (72.11%) respondents monthly income is less than Rs.20,000, while (57.82%) purchase the cosmetic product online rarely and Instagram is the most preferred social media platform for searching cosmetic information with (59.86%).

CHI-SQUARE TEST

Objective 1: To examine the level of awareness and adoption of AI-driven social media marketing tools among women cosmetic consumers in Chennai.

H₀: There is no significant association between the level of awareness and adoption of AI-driven social media marketing tools among women cosmetic consumers in Chennai.

Table 2: Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	53.686 ^a	16	.000
Likelihood Ratio	44.339	16	.000
Linear-by-Linear Association	14.855	1	.000
N of Valid Cases	147		
a. 15 cells (60.0%) have expected count less than 5. The minimum expected count is .07.			

The Chi-square test was performed to determine whether there is an association between consumers' awareness that AI is used in social media marketing for cosmetics and their interaction with AI-based tools while exploring cosmetic products. The results showed a statistically significant association between the variables ($\chi^2 = 53.686$, $df = 16$, $p = 0.000$). Since the p -value is less than the 0.05 significance level, the null hypothesis is rejected, indicating that the level awareness is associated with the adoption of AI-driven marketing tools among cosmetic consumers in Chennai.

Objective 2: To analyze the influence of AI-driven personalization and consumer engagement level on cosmetic products promoted through social media.

H₀: There is no significant association between the influence of AI-driven personalization and consumer engagement level on cosmetic products promoted through social media.

Table 3: Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	100.759 ^a	16	.000
Likelihood Ratio	84.605	16	.000
Linear-by-Linear Association	34.015	1	.000
N of Valid Cases	147		
a. 16 cells (64.0%) have expected count less than 5. The minimum expected count is .07.			

A Chi-square test of association was conducted to examine the relationship between the influence of AI-driven personalization and consumer engagement level on cosmetic products promoted through social media. The test revealed a statistically significant association between the two variables ($\chi^2 = 100.759$, $df = 16$, $p = 0.001$). Since the p -value is less than 0.05, the null hypothesis is rejected. Therefore, it is concluded that influence of AI-driven personalization is significantly associated with the consumer engagement level on cosmetic products promoted through social media.

Objective 3: To assess the impact of AI-driven social media marketing on purchase intention and cosmetic consumption behavior of women in Chennai.

H₀: There is no significant association between the impact of AI-driven social media marketing on purchase intention and cosmetic consumption behavior of women in Chennai.

Table 4: Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	109.298^a	16	.000
Likelihood Ratio	83.263	16	.000
Linear-by-Linear Association	34.761	1	.000
N of Valid Cases	147		
a. 18 cells (72.0%) have expected count less than 5. The minimum expected count is .14.			

The Chi-square analysis revealed a significant association between awareness of AI-based social media marketing and interaction with AI-powered tools ($\chi^2 = 109.298$, $df = 16$, $p = 0.000$). Therefore, the null hypothesis is rejected, indicating the impact of AI-driven social media marketing on purchase intention and cosmetic consumption behavior of women in Chennai.

Objective 4: To evaluate the role of AI-driven social media marketing in shaping Brand awareness, preference, trust, and satisfaction toward cosmetic brands among women consumers.

Table 5: Awareness of Cosmetic Brands using AI-Driven Social Media Marketing:

Cosmetic Brand	Frequency (n)	Percentage (%)
L'Oréal	41	27.9%
Maybelline	41	27.9%
Lakmé	71	48.3%
MAC Cosmetics	13	8.8%
Nykaa	61	41.5%
Sugar Cosmetics	22	15.0%
Mamaearth	43	29.3%
Plum	28	19.0%
Minimalist	26	17.7%
WOW Skin Science	5	3.4%
Others (Specify)	28	19.0%

The Table shows that the respondents are Awareness of Cosmetic Brands using AI-Driven Social Media Marketing. Out of 147 respondents, majority 48.3% are aware about Lakme's AI- driven marketing followed by 41.5% of the respondents are aware about Nykaa's AI-driven marketing. A smaller number of respondents ie., 3.4% were aware about Wow Skin Science AI- driven marketing. Since the question allowed multiple responses, some respondents selected more than one brand

therefore the total percentage exceeds 100%.

Table 6: Most Attractive, Informative and Useful AI-Driven Social Media Marketing among Cosmetic Brands:

Cosmetic Brand	Frequency (n)	Percentage (%)
L'Oréal	37	25.2%
Maybelline	30	20.4%
Lakmé	54	36.7%
MAC Cosmetics	13	8.8%
Nykaa	52	35.4%
Sugar Cosmetics	13	8.8%
Mamaearth	37	25.2%
Plum	15	10.2%
Minimalist	17	11.6%
WOW Skin Science	2	1.4%
Others (Specify)	20	13.6%

The Table 6, shows the respondents opinion about the most attractive, informative and useful AI-driven social media marketing among cosmetic brands, out of 147 respondents, majority 36.7% prefer Lakme as a well-known cosmetic brand that actively use AI based marketing tools on social media platforms followed by 35.4% of the respondents prefer Nykaa and least 1.4% prefer Wow Skin Science. Since the question allowed multiple responses, some respondents selected more than one brand therefore the total percentage exceeds 100%.

Table 7: Influence of AI-Enabled Cosmetic Brands on Purchase or Trial Decisions:

Cosmetic Brand	Frequency (n)	Percentage (%)
L'Oréal	26	17.7%
Maybelline	22	15.0%
Lakmé	52	35.4%
MAC Cosmetics	10	6.8%
Nykaa	41	27.9%
Sugar Cosmetics	11	7.5%
Mamaearth	26	17.7%
Plum	10	6.8%
Minimalist	13	8.8%
WOW Skin Science	4	2.7%
Others (Specify)	24	16.3%

The Table 7, shows that the Influence of AI-Enabled Cosmetic Brands on Purchase or Trial Decisions is Lakme with 35.4% followed by Nykaa with 27.9%, 17.7% respondents says Loreal and Mamaearth, 16.3% says other brand, 15% of the respondents says Maybelline and followed by Minimalist with 8.8%, Sugar Cosmetics with 7.5% , MAC Cosmetics with 6.8%. Since the question allowed multiple responses, some respondents selected more than one brand therefore the total percentage exceeds 100%.

Table 8: Impact of AI-Driven Social Media Marketing on Trust and Brand Loyalty:

Cosmetic Brand	Frequency (n)	Percentage (%)
L'Oréal	30	20.4%
Maybelline	24	16.3%
Lakmé	58	39.5%
MAC Cosmetics	9	6.1%
Nykaa	35	23.8%
Sugar Cosmetics	7	4.8%
Mamaearth	24	16.3%
Plum	20	13.6%
Minimalist	13	8.8%
WOW Skin Science	3	2.0%
Others (Specify)	27	18.4%

The Table 8, shows that the Impact of AI-Driven Social Media Marketing on Trust and Brand Loyalty, out of 147 respondents, Highest 39.5% says Lakme's AI-driven marketing have created a huge impact on Trust and Brand Loyalty, lowest 2% of the respondents says Wow Skin Science have created an impact on Trust and Brand Loyalty. Since the question allowed multiple responses, some respondents selected more than one brand therefore the total percentage exceeds 100%.

Table 9. Mean and Standard Deviation of Customer Satisfaction Toward AI-Driven Social Media Marketing:

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
AI-driven social media marketing increases my satisfaction with cosmetic brand selection.	147	1	5	2.35	.801
Valid N (listwise)	147				

Table 9, Explains that the mean score of 2.35 indicates that women consumers commonly agreed that AI-driven social media marketing improves their satisfaction with cosmetic brand selection. The standard deviation of 0.801 reflects a reasonable level of variability in responses, suggesting that most respondents shared similar opinions regarding the positive role of AI-driven social media marketing in influencing customer satisfaction.

FINDINGS:

The frequency and percentage analysis indicates that the majority of the respondents (51.02%) belongs to the age group 20–29 years, the highest proportion of respondents (82.99%) are single, Most of the respondents (55.10%) were Undergraduate, A significant proportion of the respondents were students (76.19%). The largest group of respondents (72.11%) had a monthly income of less than Rs.20,000. The highest percentage of respondents (57.82%) purchase cosmetic products online rarely, Instagram was the most preferred platform among the respondents (59.86%) for searching cosmetic information. Among the listed brands, the highest percentage of respondents were aware of Lakmé's AI-driven marketing with 48%. Lakme was the well-known cosmetic brand that actively uses AI-based marketing tools on social media platforms with 36.7% of respondents preferring it. Influence of AI-Enabled Cosmetic Brands on Purchase or Trial Decisions is Lakme with 35.4%. Highest 39.5% says Lakme's AI-driven marketing has created a huge impact on Trust and Brand Loyalty.

SPECIFIC FINDINGS- CHI-SQUARE TEST:

- There is significant association between the level of awareness and adoption of AI-driven social media marketing tools among women cosmetic consumers in Chennai.

- There is significant association between the level of awareness and adoption of AI-driven social media marketing tools among women cosmetic consumers in Chennai.
- There is no significant association between the impact of AI-driven social media marketing on purchase intention and cosmetic consumption behavior of women in Chennai.

MEAN AND STANDARD DEVIATION:

- The respondents stated a mean score of 2.35 (SD = 0.801), indicating that they commonly agreed that AI-driven social media marketing increases their satisfaction with cosmetic brand selection. The comparatively low standard deviation suggests that respondents' opinions were fairly reliable.

SUGGESTIONS:

Social media marketing should target young women, as they form the major consumer segment in the study. Most respondents belong to the student category with a lower income level; the cosmetic brands should provide affordable products, discounts, combo offers, and student-friendly pricing to increase purchasing intention, and also to increase the frequency of online purchases, the cosmetic brands should build trust and confidence in online shopping by providing honest product reviews, virtual beauty assistants & chatbots, trial offers, suggested virtual try-ons, secure payment options, and easy return policies. The cosmetic brands should focus on Instagram marketing, since it is the major source of information for respondents. Even cosmetic brands can promote their products using YouTube marketing by providing tutorials and after-purchase review videos; attractive reels, influencer promotions, and interactive content can help to improve engagement. Companies can collaborate with Instagram influencers and beauty bloggers to improve awareness and encourage consumers to try products online. Personalized recommendations using AI marketing tools may help increase consumer engagement and purchase intention among young consumers. Instagram can share educational content about product usage, skin care, and beauty trends to increase awareness and customer interaction.

CONCLUSION:

The study indicates that Lakme is the well-known cosmetic brand that already holds strong consumer trust and loyalty, which plays an important role in influencing purchase and trial decisions by actively using AI-based marketing tools on social media platforms. The introduction of AI-enabled marketing strengthens this impact by making product discovery and personalization easier for consumers.

Overall, the current trend in the cosmetic market is a digital and social media-based influence, creating a huge impact, especially among young consumers. Platforms such as Instagram with AI-based marketing play an important role in shaping their buying behavior, especially when the content is relatable, affordable, and trustworthy.

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