

Exploring the Influence of AI-Driven Shopping Experience on Women's Purchase Behaviour towards Organic Personal Care Products: Evidence from Chennai City

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KEYWORDS <i>Artificial Intelligence; AI Personalization; Digital Shopping Experience; Consumer Behaviour; Purchase Intention; Customer Engagement; Consumer Trust; Organic Personal Care Products</i>	Abstract Purpose :The widespread adoption of artificial intelligence (AI) in digital commerce has changed consumer behavior in searching for, assessing, and buying personal care products. This research paper analyses the effect of AI-powered shopping interactions on consumer behavior toward organic personal care products in Chennai City, focusing mostly on AI customization. Design/Methodology/Approach:The research employs a quantitative approach relying on primary survey data. The dataset used in the study is based a sample size of 200 organic personal care product consumers from Chennai that are stratified samples. Data were analyzed with descriptive statistics, exploratory factor analysis, correlative analysis, multiple regression ANOVA independent-samples t-test, chi-square analysis and structural equation modeling. The reliability of the scales used in measurement was found acceptable, as Cronbach's alpha values exceeding 0. 80 were reported after conducting preliminary tests. Findings:On average, AI personalization was rated highest (mean 4. 19) among six factors, followed by customer engagement, brand perception transparency trust in AI and purchase intention. The results of regression analysis found AI personalization to be the strongest driver for brand perception with beta coefficient () of 0. 34, statistically significant ($p < 0. 001$) while brand perception as the strongest predicting factor for purchase intention ($= 0. 41, p < 0. 001$). AI personalization, customer engagement, trust in AI all together had significant positive influence on purchase intention. In SEM, indirect effects were mediated through trust and engagement. Differences in AI-shopping preferences could be predicted through age and income as variables. Originality/Value:The investigation is an addition to the growing body of knowledge about AI-based retail through the examination of AI-facilitated shopping and its relationship with the use of organic personal care products in Chennai context. The paper brings out Truth is in creating AI-driven digital shopping experiences personalization transparency trust and engagement are key factors.
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I.Introduction

Artificial intelligence has gradually become an integral part of digital retail in the modern age. From AI-powered recommendation engines, smart search chatbots predictive analytics to targeted ads and automated customer-care assistants, all these have changed the ways in which customers are aware of, inspect and buy products. Digital storefronts no longer just offer the same basic information to every visitor but through the use of AI they are able to look at different aspects like browsing history, previous purchases, search behavior, and interaction details and this way provide more targeted and customer-preferred information.

This shift is very meaningful in retail of personal products as consumers usually seek and get a lot of information before making a decision on products that affect health appearance safety, and lifestyle. Buying organic personal care products is even more complicated for a consumer as they might have several criteria to check before deciding: ingredients in the product authenticity certifications, environment-related claims, brand image, product performance, and price. AI shopping spaces have promising potential to lower the cost of information search by providing personalized product recommendations, ingredient breakdowns, customers' feedback, and product reviews and comparisons

The organic personal care segment has attracted scholars' increasing attention and has been the subject of several studies. Research that has been done earlier has pointed out health safety, environment, and perceived-value considerations as major

determinants of consumers' attitude towards organic cosmetic products. Besides, consumer product knowledge is one of the factors that affects attitude and repurchase intentions of consumers. Recent Indian findings show that product knowledge, attitude and satisfaction are very important for continuous purchase intention for organic personal care products.

AI-powered personalization more relevant has been an important advancement in this new environment. Based on personal attributes and past behaviour, AI recommends products to the individual. The personalised recommendations are thought to potentially reduce product search as well as increase the perceived relevance. But, personalisation raises other issues as well.

The customer might become concerned about how their data is collected, if the recommendations are truly useful or whether algorithms are influencing their decision-making. This means that transparency and trust are crucial for AI-powered shopping. The significance of engaging customers should also not be neglected.

AI interfaces facilitate interactive product finding, having conversations with consumers, customising information and providing timely feedback. These experiences could lead consumers to deepen their relationship with the brand and develop stronger emotional attachment to the products and retailers

Chennai offers a suitable location for exploratory research into these relationships the support peer-reviewed article was given as a reference for this research also highlights Chennai as a significant setting for digital consumer analysis and stresses the influence of social media, online sentiment and communications and integrated digital-retailing bonds.

Meanwhile, limited current research has explored the influence of AI-enabled shopping experience on trust, engagement and purchase behavior in the organic personal care context. To date, prior research in the organic personal-care category concentrated on conventional consumer characteristics including health, ecological values, product knowledge, subjective norms, and perceived behavioral control. So, the current study aims to explore the effect of AIE features on consumers' perception of the brands and consumers' purchase intention as well as the intermediary functions of trust and engagement.

Literature Review

2.1 AI-Driven Shopping Experience

An AI-assisted shopping experience can be understood as the deployment of smart computer programs to enhance different elements of the consumer decision-making process. Such programs can include recommendation engines, intelligent search chatbots virtual assistants, etc.

An important capability of AI in retail is the capability to convert masses of consumer data into one-on-one interactions. Instead of requiring consumers to dig through big product ranges, a recommendation system can reduce the choices and offer products deemed to match individual tastes.

New research shows that, in both positive and negative ways, AI-based personalization can affect consumers. While personalization seems to raise the relevance and helpfulness felt by the customer, if personalization is taken to far, customers might feel that it's intrusive or even that privacy is at a threat.

2.2 AI Personalisation and Brand Perception

With AI personalisation retailers can create customer-specific product suggestions, promotional content, and product information based on characteristics of a consumer and past interactions of that consumer. If the suggestions appear tailored, a customer might regard the retailer as more competent and attentive. That's why personalisation might have a positive impact on brand image. Presentation of the study findings corroborates this link. AI personalisation showed the highest score ($M = 4.19$, $SD = 0.51$) out of the main study variables, meaning that people had mostly a positive impression of personalization enabled with the help of AI.

2.3 Transparency and Consumer Trust

Consumer data is a very important part of AI systems. As a result, consumers' decisions should not be limited by the usefulness of AI but by whether sellers make public their processes about data collection and algorithms. Transparency allows you to know the reason why your product has been recommended and the manner you are being used. In markets offering organically certified products, one of the major points of transparency would be that the customers want to know the ingredients used, source of materials, certification and product claims. The provided paper illustrates a positive correlation of transparency with brand perception through trust and reliability of information.

2.4 AI Trust

The concept of trust here refers mainly to the willingness of consumers to depend on an AI-assisted shopping environment. The probability for consumers to buy products or follow recommendations is higher when consumers trust the technology i. e., think it is not only reliable and accurate but also is used responsibly. For a product like one with ingredients that come from nature, a wrong recommendation may have consequences which could be very expensive for the customer or even a health risk so trust in technology is a critical factor at this stage. So, AI accuracy, transparent communication and responsible data procedures all work together to bring about consumer confidence.

2.5 Customer Engagement

Customer engagement includes consumers' mental, emotional and behavioural involvement with a brand or a digital shopping environment, respectively. AI has the capacity to generate engagement for users through features in the form of conversational agents, customised product content, real-time assistance, and interactive recommendations. The mentioned paper reports an extremely high mean of engagement of 4.12 (SD= 0.59). This shows a remarkable interaction level between customers and AI-assisted shopping activities.

Research Gap

The literature review identifies five major gaps.

- ❖ First, prior research focusing on organic personal care has mainly concentrated on health, environmental value, product knowledge, attitudes and subjective norms from consumers as well as conventional consumer variables.
- ❖ Second, the area of consumer behaviour that studies the role of AI-enabled shopping in organic personal care has not been given much empirical attention so far.
- ❖ Third, very little research has been conducted in Chennai, although the city's digital retail scene is rapidly evolving.
- ❖ Fourth, it is still unclear on the one side what channels AI uses to influence purchase outcomes, and but, that one could rely mainly on trust and customer engagement as two of the main variables that help one understand and predict how technological characteristics result in consumer responses.
- ❖ Fifth, it is necessary to examine different demographic groups' reactions to AI-supported organic personal care purchasing.

The provided research also points out that there is a lack of empirical studies establishing a link between AI-enabled digital characteristics and organic personal care purchasing in Chennai.

Objectives of the Study

1. To examine the influence of AI personalization on consumers' brand perception towards organic personal care products.
2. To determine the influence of transparency and trust in AI on brand perception.
3. To assess the influence of brand perception, AI personalization, engagement and trust on purchase intention.
4. To examine the mediating role of trust and customer engagement.
5. To identify whether consumer responses towards AI-driven shopping differ across demographic groups.

Hypotheses Development

H1. The usage of AI in personalization has a very positive effect on brand perception of organic personal care product.

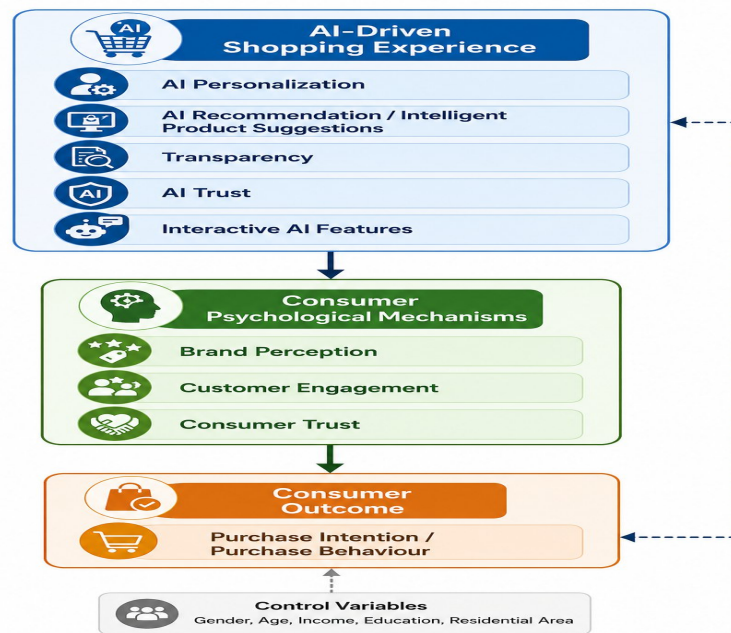
H2. Transparency is found to positively and quite a bit affect how consumers view the brand of organic personal care products.

H3. Belief in the AI technology much and positively impacts consumers' perception of brands of organic personal care products.

H4. Involvement of customers quite a bit and positively impacts the brand perception of organic personal care products.

H5. Consumers' opinions of brand products A lot and positively affect the desire to buy organic personal care products.

Conceptual Framework



Research

7. 1 Research

Quantitative method was primary data structured assess the shopping customers' towards organic personal care products.

7. 2 Population

Consumers in Chennai who get their organic personal care products via digital or digitally supported shopping channels form the focus group of this study.

7. 3 Sample and Sampling

The dataset provided contains 200 respondents only. Stratification was done in the sampling to get the demographic categories adequately represented. Besides that, the researchers mention the questionnaire being pre-tested and the preliminary scales have a value of Cronbach's alpha above 0. 80. **Note:** The sample dataset consists of 110 women and 90 men. Because of this currently statistical results must be viewed as representing evidence from a composite 200-consumer sample without focusing merely on the feminine segment.

7.4 The Data Collection tool

In this research, a pre-defined set of questions was administered using the respondents' answers to the Likert-scale items in the form: i. AI-driven personalization, ii. Personalization powered by AI, Transparency, C. Customer engagement, A. Brand image, Purchase intention

7. 5 Methods of statistical analysis

1. Summaries, 2. Validity test, 3. Dimension reduction, 4. Relationship analysis, 5. Linear regression. These statistical methods reflect the analytical layout provided in the research file.

8.1 Demographic Profile Data Analysis and Results

Demographic Variable	Category	Frequency	Percentage
Gender	Female	110	55.0
	Male	90	45.0
Age	18–24	40	20.0
	25–34	85	42.5
	35–44	45	22.5
	45+	30	15.0
Location	Urban	142	71.0
	Suburban	58	29.0

This sample is rather age youthful, as most respondents are from the 25, 34 age group (42. 5%). Among the sample, 71% are urban consumers.

8.2 Descriptive Statistics

Variable	Mean	SD	Minimum	Maximum
Brand Perception	4.08	0.55	2	5
Purchase Intention	3.85	0.62	1	5
AI Personalization	4.19	0.51	2	5
Trust in AI	3.89	0.63	1	5
Transparency	3.93	0.60	2	5
Engagement	4.12	0.59	2	5

With an overall rating of 4.19, AI personalization was rated most highly in our assessment, followed by engagement (4.12) and brand perception (4.08). Purchase intention came last with a value of 3.85. Based on these scores, consumer opinions are generally quite positive.

8.3 Reliability and Factor Validity

The preliminary questionnaire demonstrated Cronbach's alpha values above 0.80, indicating satisfactory internal consistency

Construct	Factor Loading
AI Personalization	0.82
Trust in AI	0.77
Customer Engagement	0.81
Brand Perception	0.80
Purchase Intention	0.84
Transparency	0.79

All reported factor loadings exceed 0.70, supporting the adequacy of the measurement indicators.

Variable	Brand Perception	Purchase Intention	AI Personalization	Trust	Engagement
Brand Perception	1.00	0.67	0.64	0.59	0.54
Purchase Intention	0.67	1.00	0.61	0.58	0.52
AI Personalization	0.64	0.61	1.00	0.56	0.60
Trust	0.59	0.58	0.56	1.00	0.55
Engagement	0.54	0.52	0.60	0.55	1.00

Correlation analysis reveals positive associations among all the major constructs. Among the relationships, the strongest is between brand perception and purchase intention ($r = 0.67$). The next strongest is between AI personalization and brand perception ($r = 0.64$).

8.5 Regression Analysis: Predictors of Brand Perception

Predictor	β	t-value	p-value	Decision
AI Personalization	0.34	4.72	<0.001	Supported
Transparency	0.27	3.43	0.001	Supported
Trust in AI	0.29	4.09	<0.001	Supported
Engagement	0.21	2.81	0.005	Supported

The factor that influences brand perception the most is AI personalization ($= 0.34$), while the trust in AI ($= 0.29$) ranks second. Transparency ($= 0.27$) and engagement ($= 0.21$) make up respectively the third and fourth predictor. Statistical significance is the hallmark of all these predictors.

9. Discussion

Research results indicate that AI-generated purchasing interactions can help a change a consumer's attitude toward organic cosmetic products largely. The research paper shows the most promising result to be AI personalization, which turned out as the best descriptive mean (mean = 4.19) and had the biggest effect on brand perception ($= 0.34$). Meaning, for one thing, consumers are looking for a digital experience that reduces their need for actively searching for information and gives them with recommendations that reflect their specific preferences. The result seems to be in line with the most recent studies that found out that consumer interaction with AI-based personalization systems can be both engaging and lead to actual purchases. Yet, consumer response is contingent on factors such as relevance, trustworthiness and risk perception. Another study, experimental in nature, also reveals that personalization may, for one thing, lead to an increase in purchasing behavior while however it raises issues of intrusiveness. Brand perception turned out to be the strongest factor in consumer's purchase intentions ($= 0.41$). This result implies that pure technological functionality is not going to attract the customers. The consumers have to

like the brand first of all in order for those AI-supported interactions to eventually lead to a purchase. The role of trust cannot be ignored since there was a significant indirect effect of Artificial Intelligence (AI) through trust revealed. It shows how trust is one of the key ways how AI recommendations get through to the consumers, partly because they reduce uncertainty or the feeling of unpredictability. This point is mainly relevant when it comes to personal care products because there is a general desire of consumers to be assured about the authenticity of their purchase, the ingredients and how suitable the product will be for them. Customer engagement represents another important mechanism. The significant AI → engagement → purchase intention pathway indicates that interactive digital experiences can help transform technological functionality into consumer action.

10. Theoretical Implications

The study adds four important points to consumer-behaviour and digital-retailing literature.

1) It continues the research of organic personal care by presenting AI as a modern digital stimulus for customer shopping experience. 2) It reveals that AI should not merely be perceived as yet another new technology. The different layers of personalization transparency trust and engagement each make up a separate feature of the consumer's overall experience.

3) The strong mediating paths demonstrate that a technology characteristic has its effect on purchase decision by activating psychological mechanisms 4) This article connects the research on digital shopping with the behaviour of consumers towards organic personal care in an Indian city.

11. Managerial Implications

11.1 Enhance AI personalization .Natural beauty retailers should make recommendations accurate and relevant to the consumers. Personalization may be done based on consumer preferences, product types, search history, and purchase history but should not get intrusive.

11.2 Enhancing transparency: Brands need to clearly explain the basis for product recommendations and what customer data are used. Transparency helps reduce doubt and strengthens customer trust

11.3. Trust in AI: AI systems should provide accurate product details and not make exaggerated claims or unsupported claims. Linking organic product recommendations to verifiable features can help in gaining customer trust.

11.4 Enhance customer participation: Chatbots, product personalisation explanations, smart searching, and virtual consultations could help in engaging customers

11.5 Concentrate on younger digital consumers: Our analysis showed that the 25- 34 age group is the most active for purchase. So, one might target younger adult consumers by introducing digitally mature campaigns.

12. Ethical Implications : Shopping enabled by AI comes with several ethical dilemmas.

Information Privacy: If a personalized suggestion is data shows a consumer brings, then it is vital that retailers inform their customers about the data collected and the use thereof.

Implicit Bias in Algorithms

Recommendation systems powered by artificial intelligence can reflect and reproduce societal inequalities embedded in training data. Retailers should track the suggestions made by a recommendation system to catch unfair or systematically distorted results.

Free Choice of customers : Artificial intelligence should help consumers make informed choices and not pressure them to buy products they don't want.

Reveal: Customers have the right to know they are dealing with a machine and understand the main principles behind the recommendations.

13. Limitations

The study has several limitations.

- First, the limited sample size of 200 respondents could be considered an issue as it would be difficult to generalize the findings.
- In the second place, the scope of the study is only one city - Chennai.
- Third, the paper relies on cross-sectional data, which is a serious limitation in that it allows no identification of the effects of causal relationships over time.
- Fourth, the reported results refer to purchase intention rather than actual behaviour as seen through a purchase.
- Fifth, in the data set given, both male and female respondents are presented, and so the tables cannot actually describe a female-only study.
- Sixth, in the supplied material, you miss the essential CFA/SEM indicators like CFI TLI RMSEA, SRMR, /df, AVE, and HTMT, which together make up the complete fit indices. As a result, in a paper submission to a journal, all the mentioned fit indices have to be included if the original data file and the SEM results are available.

14. Future Research

- Future research could include larger female-only samples to better understand the shopping behaviour of women.
- A study on the effect of AI shopping on actual repeat purchases rather than just the intent to buy over time is needed.
- Possible lines of future research are comparing women by age, income and occupation.
- Other variables can be added, including perceived risk, perceived usefulness, privacy concern, how well recommendations are done, quality of AI chatbot, perceived value, and product knowledge.
- In addition, comparing Chennai to Bangalore, Hyderabad, Mumbai, and Delhi could be the subject of future research.

Conclusion

The paper focuses on how a digital shopping experience powered by AI influences people's reactions to organic personal-care products, mostly for Chennai. Research says that AI customisation is at the top of digital shopping experiential dimensions and that brand perception is the most powerful predictor of purchase intention. The regression statistics back up significant causal relationships, while SEM reveals significant indirect effects via trust and engagement. Based on the outcomes, the integration of AI with organic personal care brands could be a worthwhile value creation strategy for them, by enhancing the level of relevance, minimising the information-search workload and providing a meaningful consumer interaction. Then again, AI-powered shopping has to be more than just personalization - factors like transparency trust privacy and consumer control are equally critical for its success. To that end, it is recommended, for organic personal care brands, that the AI systems developed should be both personalized and trustworthy, interactive and transparent, technologically sophisticated, and socially responsible.

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