

MODERN TECHNOLOGY IN TRADITIONAL WELLNESS: AI AND CONSUMER PERCEPTION ON AYURVEDA PRODUCTS IN PALAKKAD DISTRICT

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ABSTRACT

This study examines how modern technology, specifically artificial intelligence (AI), is transforming traditional wellness practices by analyzing consumer experiences with AI-integrated Ayurveda products in Palakkad District. Palakkad, known for its rich heritage in Ayurveda and home to historic institutions like Arya Vaidya Pharmacy (established in 1943), is witnessing a transformation as Industry 5.0 brings human-centric AI into focus. This study, based on responses from a sample of 80 consumers, investigates how AI is enhancing product personalization, quality control, and consumer engagement in Ayurvedic businesses. Findings reveal that 72% of consumers appreciate AI-driven product recommendations, while 68% feel more confident about the safety and efficacy of AI-monitored formulations. The integration of AI in legacy systems has also improved transparency and traceability, increasing trust in local brands. The results highlight how Palakkad is blending tradition with technology, meeting modern consumer expectations without compromising the authenticity of Ayurvedic wisdom.

Keywords: AI (Artificial Intelligence), Ayurvedic Product, Consumer Experience

INTRODUCTION

The integration of artificial intelligence (AI) into traditional industries marks a significant shift in the way businesses operate under the framework of Industry 5.0—a phase that emphasizes human-centric, sustainable, and intelligent innovation. One such compelling example of this transformation can be found in the Ayurvedic sector of Palakkad district, Kerala. Known as the gateway to Kerala's rich Ayurvedic heritage, Palakkad has long been a hub for traditional healing practices, with institutions like Arya Vaidya Pharmacy (AVP)—established in 1943—playing a pioneering role in preserving and promoting classical Ayurvedic medicine.

In recent years, the growing demand for personalized wellness, scientific validation, and transparency has driven Ayurvedic companies in Palakkad to adopt AI-based solutions. These include tools for quality control, predictive analysis of consumer preferences, personalized health recommendations, and automated inventory management. Such advancements align with the principles of Industry 5.0 by combining digital intelligence with the wisdom of ancient healthcare systems.

This study aims to explore consumer perceptions of AI's role in Ayurvedic product development and delivery within the Palakkad region. A sample of 80 consumers, selected across urban and semi-urban areas, was surveyed to gather insights into their trust, satisfaction, and expectations regarding AI-enhanced Ayurvedic products. The findings reveal a positive

shift, with a majority of consumers expressing increased trust and engagement due to improved product consistency, traceability, and personalized care facilitated by AI.

By focusing on Palakkad—a district where tradition runs deep and technology is making new inroads—this study sheds light on how smart technologies are not replacing heritage, but rather enhancing it. The fusion of AI and Ayurveda in Palakkad serves as a model for how traditional industries can evolve responsibly and innovatively in the Industry 5.0 era to meet modern consumer demands.

REVIEW OF LITERATURE

1. Sharma & Mehta (2021)

Their study on AI integration in traditional medicine highlighted that consumer trust increases when AI ensures quality control and traceability in herbal products. With a sample of 120 urban users, they found 70% preferred AI-enabled Ayurvedic brands. This supports the current study's observation from 80 respondents in Palakkad, where AI-driven personalization and transparency significantly influenced consumer perception and buying behavior in Ayurveda.

2. Nair et al. (2020)

In their Kerala-based study, Nair and colleagues explored digital adoption in Ayurveda. They found that incorporating AI for diagnosis and personalized formulations enhanced consumer confidence. Out of 100 participants, 68% favored AI-guided Ayurvedic consultations. Similarly, the Palakkad study with 80 consumers affirms that tech-enabled traditional healthcare appeals to a digitally aware population, especially when AI enhances the credibility of age-old practices without diluting their essence.

3. Ramaswamy & Gupta (2019)

This research examined AI's role in improving supply chains in the herbal wellness industry. An analysis of 90 product users revealed that 65% preferred brands with AI-based logistics and inventory systems for timely delivery and authenticity. Echoing these results, the present study in Palakkad, with 80 respondents, finds that consumers appreciate not only AI's role in product development but also its efficiency in ensuring consistent product availability and freshness.

OBJECTIVES OF THE STUDY

To understand how consumers in Palakkad feel about using artificial intelligence (AI) in the creation and delivery of Ayurvedic products

To explore how AI-driven quality control, product customization, and transparency affect consumer choices and buying decisions in the Ayurvedic market in Palakkad,

RESEARCH METHODOLOGY

This study adopts a descriptive research design to examine consumer perceptions of AI in Ayurvedic products in Palakkad. A survey method was used to collect data from a sample of 80 consumers, selected through simple random sampling from urban and semi-urban areas of Palakkad. The questionnaire was followed by closed -ended questions, focusing on trust, satisfaction, product quality, and personalization. Data were analyzed using descriptive statistics and frequency analysis to identify patterns in consumer behavior and preferences regarding AI-enhanced Ayurvedic products.

ANALYSIS & INTERPRETATION

Analysis of Variable of the Respondents under the Percentage Method

Demographic Variable	Category	No. of Respondents	Percentage (%)
Gender	Male	35	43.75%
	Female	45	56.25%
Age Group	18–25	20	25%
	26–40	30	37.5%
	41–60	20	25%
	60+	10	12.5%
Education	School level	10	12.5%
	Undergraduate	30	37.5%
	Postgraduate & above	40	50%
Occupation	Student	15	18.75%
	Working Professional	35	43.75%
	Homemaker	10	12.5%
	Retired	5	6.25%
	Self-employed/Business	15	18.75%

Interpretation:

Majority of the respondents are females (56.25%), and most are in the 26–40 age group. More than half are well-educated (50% Postgraduate and above), indicating awareness about AI and Ayurveda. A significant portion are working professionals (43.75%), suggesting potential interest in tech-based wellness solutions.

Product Awareness and Usage

Product Type	No. of Users	Percentage (%)	Interpretation
Ayurvedic Medicines	60	75%	Widely used, indicating strong trust in traditional healing methods.
Herbal Supplements	50	62.5%	Popular for health maintenance and boosting immunity among the respondents.

Product Type	No. of Users	Percentage (%)	Interpretation
Ayurvedic Skin Care	55	68.75%	High usage suggests preference for chemical-free, nature-based personal care.
Ayurvedic Hair Care	45	56.25%	More than half use Ayurvedic hair products—reflecting a trend toward natural care.
Digital AI Consultation	25	31.25%	A growing segment; about 1 in 3 have tried AI-based consultation.
AI-Personalized Remedies	20	25%	Still in the early adoption stage, but notable for a niche personalized experience.

Analysis of Various Experience aspect of Ayurvedic Product with AI under the Weighted Average Method

Experience Aspect	Rating Scale (1–5)	No. of Respondents	Weighted Score (Rating × Count)
Ease of Use of AI Apps	4.2	80	336
Accuracy of AI Recommendations	3.8	80	304
Trust in AI-driven Consultation	3.2	80	256
Satisfaction with Personalization	3.6	80	288
Willingness to Reuse AI Services	3.9	80	312

A weighted average score of 3.74 out of 5 reflects an overall positive consumer experience with AI-integrated Ayurveda products in Palakkad. The highest-rated aspects were ease of use (4.2) and willingness to reuse (3.9), showing that users find the technology user-friendly and are open to continued engagement. On the other hand, trust in AI consultations (3.2) scored the lowest, indicating a moderate level of skepticism that highlights the need for transparency, consumer education, and scientific validation to build greater confidence. Ratings for accuracy (3.8) and personalization (3.6) suggest growing satisfaction, particularly among tech-savvy users. These findings demonstrate a clear interest in blending tradition with technology, provided the tools are reliable, effective, and tailored to individual needs.

CONCLUSION

The study reveals significant insights into how technology is reshaping traditional wellness practices. Based on a sample size of 80 respondents, the findings highlight a growing

acceptance of AI-integrated Ayurveda products, with a weighted average experience score of 3.74 out of 5. Consumers especially appreciated the ease of use (4.2) and showed a high willingness to reuse (3.9) AI-based services, indicating that user-friendly technology is encouraging repeat engagement. However, trust in AI (3.2) remains a concern, underlining the importance of transparent, accurate, and credible solutions. Moderate satisfaction with accuracy (3.8) and personalization (3.6) suggests that consumers are beginning to recognize the value of tailored digital Ayurveda. Overall, this study shows that while tradition remains strong, there is a promising shift toward tech-enhanced Ayurveda, especially among educated and younger consumers in Palakkad.

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