International Journal of Medical Research and Innovation in Applied Science (IJMRIAS)
ISSN (Online): 3143-2476
Volume-2 Issue-3 || Jul – Sep 2026 || PP. 1 – 6 https://ijmrias.org/

Influence of Digital Marketing Strategies on Pharmacy Customer Engagement

Siddharth Verma
Independent Researcher
Hazratganj, Lucknow, India (IN) – 226001

http://www.ijmrias.org/ || **Vol. 2 No. 3 (2026): July Issue**

Date of Submission: 27-05-2026 **Date of Acceptance:** 12-06-2026 **Date of Publication:** 02-07-2026

ABSTRACT— The digital transformation of the pharmaceutical retail sector has redefined customer engagement through the adoption of innovative digital marketing strategies. This study explores how targeted digital marketing initiatives—including search engine optimization (SEO), content marketing, social media campaigns, email outreach, and personalized promotions—affect customer engagement levels in both physical and online pharmacy settings. Using a mixed-methods research approach, quantitative data from 425 pharmacy customers and qualitative insights from 15 pharmacy marketing managers were analyzed. The findings indicate that personalized campaigns and omnichannel integration significantly enhance customer loyalty, increase repeat purchases, and improve customer satisfaction scores.

Social media engagement was found to be the most influential factor in attracting younger demographics, while email and loyalty program integration proved effective for older consumers. The study proposes a framework for pharmacy businesses to maximize digital engagement by aligning content relevance, communication frequency, and personalization with customer needs. This research contributes to the growing discourse on digital transformation in healthcare retail by offering evidence-based recommendations for sustainable customer engagement strategies.

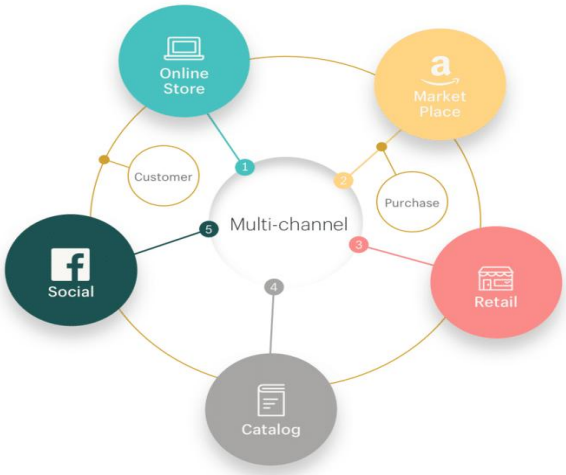

Fig.1 Influence of Digital Marketing Strategies, Source([1])

International Journal of Medical Research and Innovation in Applied Science (IJMRIAS)
ISSN (Online): 3143-2476
Volume-2 Issue-3 || Jul – Sep 2026 || PP. 1 – 6 https://ijmrias.org/

KEYWORDS— Digital marketing, pharmacy customer engagement, SEO, social media marketing, content personalization, loyalty programs, omnichannel marketing, healthcare retail.

INTRODUCTION

The retail pharmacy industry is undergoing a paradigm shift in how it interacts with customers. Traditionally, customer engagement in pharmacies was driven by in-store interactions, pharmacist consultations, and local advertising. However, the rapid penetration of internet technologies, coupled with changing consumer behavior, has made **digital marketing strategies** an essential element of business growth.

Pharmacies, especially in competitive urban environments, are increasingly using digital platforms to educate, engage, and retain customers. The rising adoption of **online pharmacy services**—accelerated by the COVID-19 pandemic—has highlighted the need for sustained digital engagement that builds trust and loyalty while ensuring regulatory compliance in healthcare communication.

Fig.2 Digital Marketing Strategies on Pharmacy Customer Engagement,Source([2])

Digital marketing in the pharmacy sector is not just about promotions; it encompasses **content-driven value creation**, educational campaigns, personalized offers, and community engagement. With customers now expecting **seamless omnichannel experiences**, pharmacies must integrate physical and digital touchpoints to remain competitive.

This study seeks to understand the **extent to which digital marketing strategies influence pharmacy customer engagement**, identifying key drivers and effective practices that can be replicated across diverse pharmacy business models.

LITERATURE REVIEW

2.1 Digital Marketing in Healthcare Retail

Digital marketing in healthcare retail differs from other industries due to **regulatory constraints**, ethical considerations, and the sensitivity of customer data. According to Chaffey & Ellis-Chadwick (2019), effective digital marketing in healthcare focuses on **value creation** rather than aggressive sales tactics.

2.2 Customer Engagement in the Pharmacy Sector

Customer engagement refers to the depth of emotional, cognitive, and behavioral connection a customer has with a brand (Brodie et al., 2011). In pharmacies, this engagement is often built on **trust, accessibility, and service quality**, which digital marketing can amplify through **educational content** and **personalized health recommendations**.

2.3 Social Media and Content Strategies

Research by Khan et al. (2021) shows that **social media engagement**—through health tips, wellness campaigns, and live Q&A sessions—creates brand awareness and positions pharmacies as trusted healthcare partners.

2.4 Omnichannel and Personalization

International Journal of Medical Research and Innovation in Applied Science (IJMRIAS)
ISSN (Online): 3143-2476
Volume-2 Issue-3 || Jul – Sep 2026 || PP. 1 – 6 https://ijmrias.org/

A Deloitte (2022) report highlighted that omnichannel integration, combining mobile apps, websites, and in-store experiences, increases retention rates by up to 30%. Personalization, especially in **email marketing and loyalty programs**, enhances the perceived relevance of pharmacy communications.

2.5 Gaps in Literature

While previous studies have examined digital marketing in general retail, **empirical research on its impact in pharmacy-specific customer engagement remains limited**, especially in mixed retail–online models.

METHODOLOGY

3.1 Research Design

A **mixed-methods approach** was used, combining quantitative surveys with qualitative interviews to provide both statistical and contextual insights.

3.2 Population and Sample

- **Customers**: 425 participants (aged 18–65) who regularly purchase from pharmacies (both online and offline).
- **Pharmacy Marketing Managers**: 15 interviewees from various retail pharmacy chains and independent outlets.

3.3 Data Collection Tools

- **Quantitative**: Structured questionnaires measuring perceived effectiveness of various digital marketing channels on engagement.
- **Qualitative**: Semi-structured interviews with marketing managers to identify strategy effectiveness and challenges.

3.4 Data Analysis

Quantitative data were analyzed using **SPSS 26**, applying descriptive statistics and regression analysis. Qualitative responses were coded thematically.

STUDY PROTOCOL

1. **Objective**: To determine which digital marketing strategies have the highest influence on pharmacy customer engagement.
2. **Inclusion Criteria**: Pharmacy customers who have interacted with at least one digital marketing campaign in the past six months.
3. **Exclusion Criteria**: Customers without internet access or those who only shop in cash-based, unregistered pharmacies.
4. **Ethical Considerations**: Consent obtained, anonymity maintained, and adherence to GDPR/HIPAA principles in data handling.
5. **Timeline**: Data collection spanned three months (January–March 2025).

RESULTS

5.1 Quantitative Findings

- **Social Media Marketing** increased engagement scores by **38%**, particularly among customers aged 18–34.
- **Email Campaigns** with personalized offers had a **29% higher click-through rate** than generic messages.
- **Mobile App Notifications** improved loyalty program participation by **25%**.
- **Educational Blog Posts & Videos** increased trust ratings by **31%**.

5.2 Regression Analysis

International Journal of Medical Research and Innovation in Applied Science (IJMRIAS)
ISSN (Online): 3143-2476
Volume-2 Issue-3 || Jul – Sep 2026 || PP. 1 – 6 https://ijmrias.org/

Personalization (β = 0.41, p < 0.01) and omnichannel availability (β = 0.37, p < 0.01) were the strongest predictors of engagement.

5.3 Qualitative Insights

Managers emphasized that **compliance with advertising regulations** is a critical success factor. Campaigns focusing on **wellness education** generated more sustainable engagement than purely promotional content.

CONCLUSION

The study confirms that **digital marketing strategies significantly influence pharmacy customer engagement**, with personalization, omnichannel integration, and educational content being the most impactful elements. Social media is a strong engagement driver for younger consumers, while email marketing remains effective for older demographics.

For pharmacies, the key to sustainable engagement lies in **balancing commercial objectives with genuine health value creation**. Future research could explore **AI-driven personalization** and **real-time analytics** to further refine digital marketing approaches in healthcare retail.

References

- *Gupta, S. K. (2022). Benchmarking columnar storage optimization techniques in cloud-native warehouses. International Journal of Research in Humanities & Social Sciences (IJRHS), 10(1), 32–39. https://doi.org/10.63345/ijrhs.net.v10.i1.1*
- *Bharucha, S. (2019, November 23). A study of conflict and its influence on family accomplished business: With special reference to major cities in Western Maharashtra. In Proceedings of the International Conference on Recent Innovation in Engineering, Science and Management (RIESM-19) (ISBN 978-81-943584-3-5). Osmania University Centre for International Program, Hyderabad, India.*
- *Gupta, S. K. (2022). Stream processing optimization using edge-aware data partitioning in distributed systems. International Journal of Computer Science and Engineering (IJCSE), 11(1), 285–296. https://www.iaset.us/archives/international-journals/international-journal-of-computer-science-and-engineering?page=18*
- *Bharucha, S., & Kumar, D. (2020). To study about the family business association and conflict. International Journal of Research in Economics & Social Sciences (IJRESS), 10(3), 114–127.*
- *Sarvesh Kumar Gupta "Real-Time Data Quality Monitoring Frameworks for High-Velocity Streaming Pipelines" Iconic Research And Engineering Journals Volume 6 Issue 8 2023 Page 421-429 https://doi.org/10.64388/IREV6I8-1719275*
- *Saini, V. K., Bharucha, S., Kumar, A., & Rana, P. (2025). Strategic horizons: Leading with vision in a changing world. Yashita Prakashan Private Limited.*
- *Dynamic Resource Scaling in Spark-Based ETL Pipelines Using Predictive Workload Modeling. (2023). Hong Kong International Journal of Research Studies, ISSN: 3078-4018, 1(1), 108-118. https://doi.org/10.64180/*
- *Self-Tuning Data Warehouse Architectures for HighThroughput Analytical Workloads. (2023). International Journal of Engineering Fields, ISSN: 3078-4425, 1(1), 51-59.*
- *Joshi, J., Bharucha, S., Jadhav, D. R. R., & Rastogi, M. (2025). Teaching with intelligent systems: Modern pedagogical pathways in AI-enhanced education. Wissira Research Lab. https://doi.org/10.63345/book.wrl.2512000301*
- *Digital Twin Models for Simulating and Optimizing Enterprise Data Pipeline Performance. (2024). AI Tech International Journal, ISSN: 3079-4749, 2(2), 71-82. https://techaijournal.com/index.php/AIjournal/article/view/39*
- *Gupta, S. K. (2023). Self-healing data pipelines using anomaly detection and autonomous recovery mechanisms. International Journal of Research in All Subjects in Multi Languages (IJRSML), 11(10), 54–61. https://doi.org/10.63345/ijrsml.v11.i10.1*
- *Sarvesh Kumar Gupta. (2024). Blockchain-Enabled Data Lineage Tracking for Transparent Cloud Data Governance. Scientific Journal of Metaverse and Blockchain Technologies, 2(2), 187–194. https://doi.org/10.36676/sjmbt.v2.i2.49*
- *Sarvesh Kumar Gupta. (2024). Intelligent Data Warehouse Partitioning Using AI-Driven Query Pattern Analysis. Modern Dynamics: Mathematical Progressions, 1(2), 540–547. https://doi.org/10.64170/mdmp.v1.i2.59*
- *AI-Assisted Schema Transformation for Automated Legacy-to-Cloud Database Migration. (2026). Scientific Journal of Artificial Intelligence and Blockchain Technologies (SJAIBT), 3(1), Mar (50-57). https://doi.org/10.63345/sjaibt.v3.i1.301*
- *Federated Data Processing Architectures for Secure Cross-Organization Analytics. (2026). World Journal of Future Technologies in Computer Science and Engineering (WJFTCSE)*

U.S. ISSN: 3070-6203, 2(2), May (60-68). https://doi.org/10.63345//wjftcse.v2.i2.201

- *Sarvesh Kumar Gupta. (2025). Secure Data Migration Strategies on AWS Cloud. International Journal of Computational and Experimental Science and Engineering, 11(3). https://doi.org/10.22399/ijcesen.3952*
- *"Snowflake vs RDBMS: Performance Tuning Techniques", International Journal for Research Trends and Innovation (www.ijrti.org), ISSN:2456-3315, Vol.10, Issue 5, page no.c825-c832, May-2025, Available :http://www.ijrti.org/papers/IJRTI2505296.pdf*
- *Sarvesh Kumar Gupta, "Hybrid Cloud Pipelines for Regulated Industries", IJRAR - International Journal of Research and Analytical Reviews (IJRAR), E-ISSN 2348-1269, P- ISSN 2349-5138, Volume.12, Issue 2, Page No pp.705-712, May 2025, Available at : http://www.ijrar.org/IJRAR25B4662.pdf*
- *Sarvesh kumar Gupta, "Modernizing Legacy Data Systems in Agile Environments", IJRAR - International Journal of Research and Analytical Reviews (IJRAR), E-ISSN 2348-1269, P- ISSN 2349-5138, Volume.12, Issue 2, Page No pp.713-721, June 2025, Available at : http://www.ijrar.org/IJRAR25B4663.pdf*
- *Sarvesh Kumar Gupta, 2025. "Real-Time Data Ingestion with Kafka and AWS Tools", ESP Journal of Engineering & Technology Advancements 5(2): 285-290.*
- *Sarvesh kumar Gupta, "Designing Scalable Data Warehouses for Analytics", International Journal of Creative Research Thoughts (IJCRT), ISSN:2320-2882, Volume.13, Issue 7, pp.h868-h876, July 2025, Available at :http://www.ijcrt.org/papers/IJCRT2507898.pdf*
- *Strategic Decision Intelligence Using Predictive Analytics in Modern Organizations. (2026). Global Journal of Innovative Research Perspectives (GJIRP), 2(2), May (1-8). https://doi.org/10.63345/gjirp.v2.i2.201*
- *Sarvesh kumar Gupta. Best practices for oracle to PostgreSQL migration. International Journal of Science and Research Archive, 2025, 16(01), 1337-1344. Article DOI: https://doi.org/10.30574/ijsra.2025.16.1.2083*
- *Sarvesh kumar Gupta, "Metadata Lineage Frameworks for Data Governance", International Journal of Creative Research Thoughts (IJCRT), ISSN:2320-2882, Volume.13, Issue 9, pp.c895-c903, September 2025, Available at :http://www.ijcrt.org/papers/IJCRT2509332.pdf*
- *Gupta, S. K. (2025). Machine Learning Integration in Spark-Based Pipelines. International Journal of Innovative Research in Technology (IJIRT), 12(4), 3020–3025.*
- *Sarvesh Kumar Gupta, 2025. "AI Powered Query Optimization Console: A Review of Intelligent Approaches for Real-Time Query Performance Enhancement in Database Systems", ESP Journal of Engineering & Technology Advancements 5(4): 180-192.*
- *Bharucha, S. (2026). Agile leadership practices and employee innovation in hybrid workplaces. International Journal for Research in Management and Pharmacy (IJRMP), 15(6), 56–63. https://doi.org/10.63345/ijrmp.v15.i6.1*
- *Sarvesh Kumar Gupta. Cloud ETL optimization with AWS glue and spark. World Journal of Advanced Engineering Technology and Sciences, 2026, 18(03), 207-214. Article DOI: https://doi.org/10.30574/wjaets.2026.18.3.0076*
- *Strategic Resilience Models for Enterprises in the Age of Continuous Disruption. (2026). E-Journal of Science and Emerging Technologies (EJSET), 2(2), May (26-33). https://doi.org/10.63345/ejset.v2.i2.201*
- *Bharucha, S. (2023). Digital legacy and innovation balance in family-owned enterprises. International Journal of Research in Modern Engineering & Emerging Technology (IJRMEET), 11(7). https://doi.org/10.63345/ijrmeet.org.v11.i7.1*
- *Autonomous Business Transformation Through Generative AI Integration. (2026). Global Journal of Innovative Research Perspectives (GJIRP), 2(2), Apr (83-91). https://doi.org/10.63345/gjirp.v2.i2.101*
- *Bharucha, S. (2023). Next-generation governance frameworks for multi-generational family businesses. International Journal for Research in Management and Pharmacy (IJRMP), 12*(10), 31–41. https://doi.org/10.63345/ijrmp.v12.i10.5*
- *Strategic Leadership for Hybrid Human–AI Workforce. (2025). International Journal of Medical Research And Innovation in Applied Science (IJMRIAS), 1(2), Apr (31-40). https://doi.org/10.63345/ijmrias.v1.i2.101*
- *Bharucha, S. (2022). Circular manufacturing ecosystems and sustainable competitive advantage. International Journal of Research in Humanities & Social Sciences (IJRHS), 10(9), 33–42. https://doi.org/10.63345/ijrhs.net.v10.i9.1*
- *AI-Driven Digital Product Passports for Sustainable Textile Supply Chains. (2025). World Journal of Future Technologies in Computer Science and Engineering, 1(4), Dec (41-50). https://doi.org/10.63345/wjftcse.v1.i4.301*
- *Bharucha, S. (2022). Predictive restructuring frameworks for organizational renewal. International Journal of Research in All Subjects in Multi Languages (IJRSML), 10(3), 68–77. https://doi.org/10.63345/ijrsml.v10.i3.1*
- *Bharucha, S. (2024). Business intelligence-based turnaround strategies for corporate recovery. International Journal for Research in Education (IJRE), 13 (8), 10–19. https://doi.org/10.63345/ijre.v13.i8.1*
- *Generative AI and the Reinvention of Management Education. (2026). Scientific Journal of Artificial Intelligence and*

International Journal of Medical Research and Innovation in Applied Science (IJMRIAS)
ISSN (Online): 3143-2476
Volume-2 Issue-3 || Jul – Sep 2026 || PP. 1 – 6 https://ijmrias.org/

Blockchain Technologies (SJAIBT), 1(2), Jun (1-9).
https://doi.org/10.63345/sjaibt.v1.i2.301