

“MICROSEGMENTATION IN PHARMACEUTICAL MARKETING: LEVERAGING DIGITAL BEHAVIOR IN HYPER-PERSONALISED BRAND PROPOSITIONS”

SUBMITTED BY:

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UNDER THE GUIDANCE OF:

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PROFESSOR

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ABOUT THE ORGANISATION:-

- B-black Belt Brand Builders
- Founder: Mr. Vivek Hattangadi
- Est. 2004
- Headquarter: Ahmedabad, Gujrat

‘B – black belt brand builders’ exists only to mentor pharma brand teams and sales teams to build, healthy, robust and resilient brands through good branding practices.



From: Vivek Hattangadi

MISSION AND VISION OF OUR COMPANY:-

- **Mission:** 'B-Black Belt Brand Builders' exists to mentor pharma brand teams and sales teams to build healthy , robust and resilient brands through good branding practices.
- **Vision:** To become the most dependable, trusted and respected pharma consultancy.

INTRODUCTION:-

The pharmaceutical industry is rapidly evolving, driven by digital transformation and personalized engagement.

With india's market projected to hit 10.90 lac cr. Rs. By 2030, marketers are shifting from mass outreach to micro segmentation.

- Leveraging AI, data analytics, and digital behavior, hyper personalization is redefining stakeholder engagement across channels.

OBJECTIVES:-

THE STUDY SETS OUT TO:

1. Examine how micro segmentation enhances engagement in pharmaceutical marketing.
2. Evaluate the role of digital behavioural data in developing hyper-personalized brand propositions.
3. Contrast traditional segmentation with micro segmentation in terms of marketing effectiveness.
4. Identify challenges and opportunities in implementing ai-powered micro segmentation models.

METHODOLOGY:-

Approach Used:

- Mixed-Method Design (Quantitative and Qualitative research)
- Integrates Systematic Literature Review + Primary Survey
- Total Respondents: 200
- Included: Consumers, Pharmacists, Prescribers
- Tool: Structured Questionnaire

Systematic Literature Review

- Databases: Google Scholar, PubMed
- Guidelines Followed: PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)

Data Analysis Techniques:

- **Quantitative:** Descriptive Statistics (using R software)
- **Qualitative:** visualization Techniques: word clouds (using R) , bibliometric analysis, sentiment analysis (using R)

Statistical methods

- **Software:** Spreadsheet, MS Excel, R for quantitative analysis.
- **Anova test:** done annova with one factor
- **Inferential Statistics:-**
 - **Bibliometric Analysis:** To visualize keyword co-occurrence and publication trends, identifying research themes in micro-segmentation.

Qualitative method

- **Word cloud:** for visualisation of most occurring themes.
- **Sentiment analysis:** Analyse and Visualise text data to identify underlying emotions

Hypothesis

- **Null hypothesis (H0):**
- There is no significant difference in the mean response scores among the three statements about digital pharma marketing
- **Alternative hypothesis (H1):**
- There is a significant difference in the mean response scores for at least one of the statements.

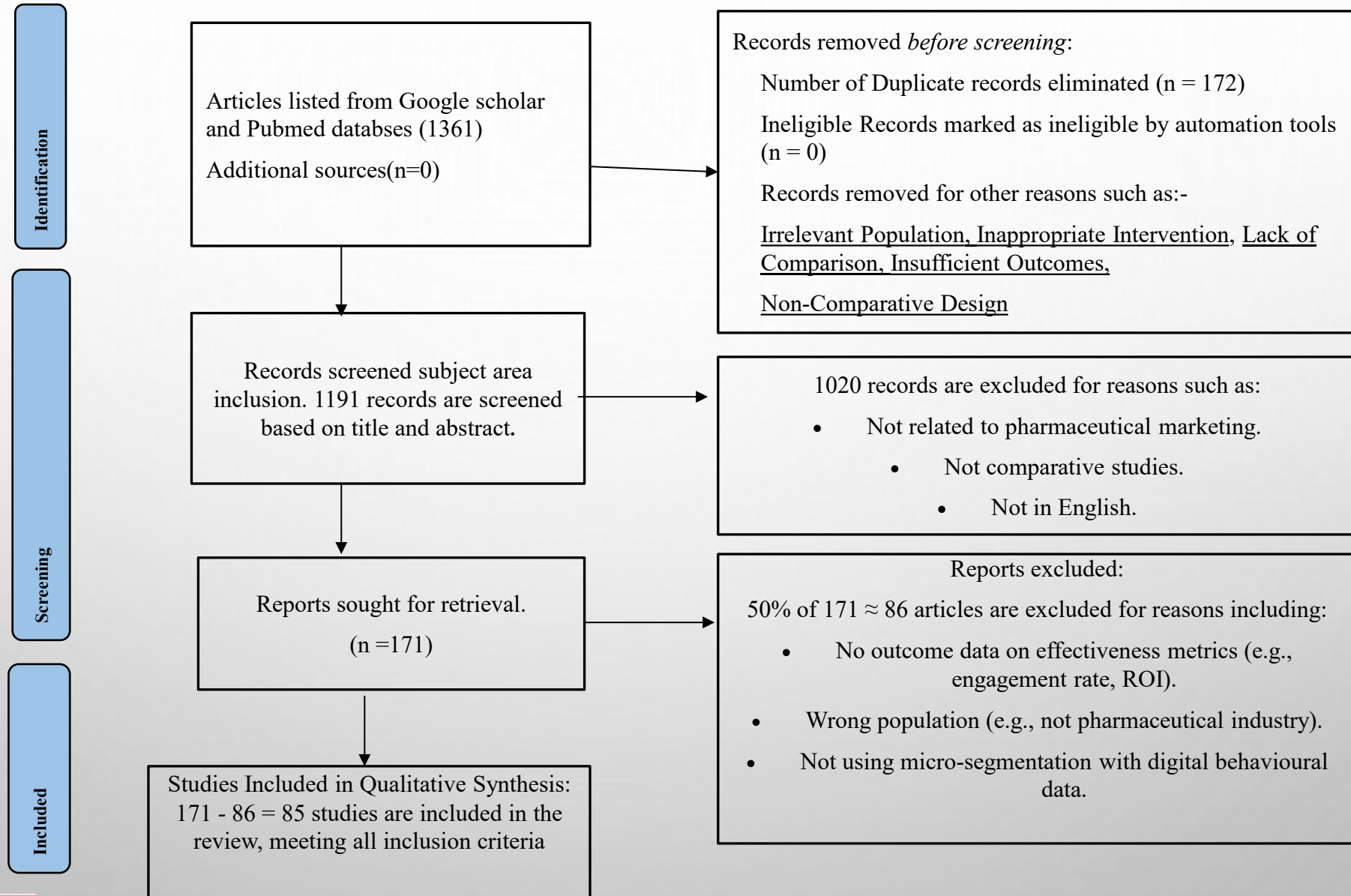
RESEARCH QUESTION:-

1. What impact does micro-segmentation have on pharmaceutical marketing strategies?
 2. What is the role of digital behavioural data in shaping hyper-personalized brand propositions?
 3. How powerful is micro-segmentation in comparison to traditional segmentation methods in pharma marketing?
 4. What are the challenges in pharmaceutical companies adopting ai-driven segmentation models?
- **Major research question:** how does micro-segmentation, driven by digital behavioural data, impact the effectiveness of pharmaceutical brand communication compared to traditional segmentation methods?

PICO ANALYSIS:-

PICO Element	Detailed Description
P – Population / Problem	Pharmaceutical companies, brand managers, marketing strategists, and digitally active healthcare professionals (HCPs) or patients targeted by brand communications.
I – Intervention / Exposure	Implementation of micro-segmentation models utilizing digital behavioural data, including online search Behaviour, clickstream data, social media activity, CRM logs, and eRx trends.
C – Comparison	Use of traditional segmentation methods such as demographic, geographic, or psychographic profiling without real-time digital Behaviour integration.
O – Outcome	Improved effectiveness of brand communication measured by metrics such as: engagement rate, message relevance, conversion rate, ROI, HCP/patient satisfaction, and adherence Behaviour.

PRISMA APPROACH:-



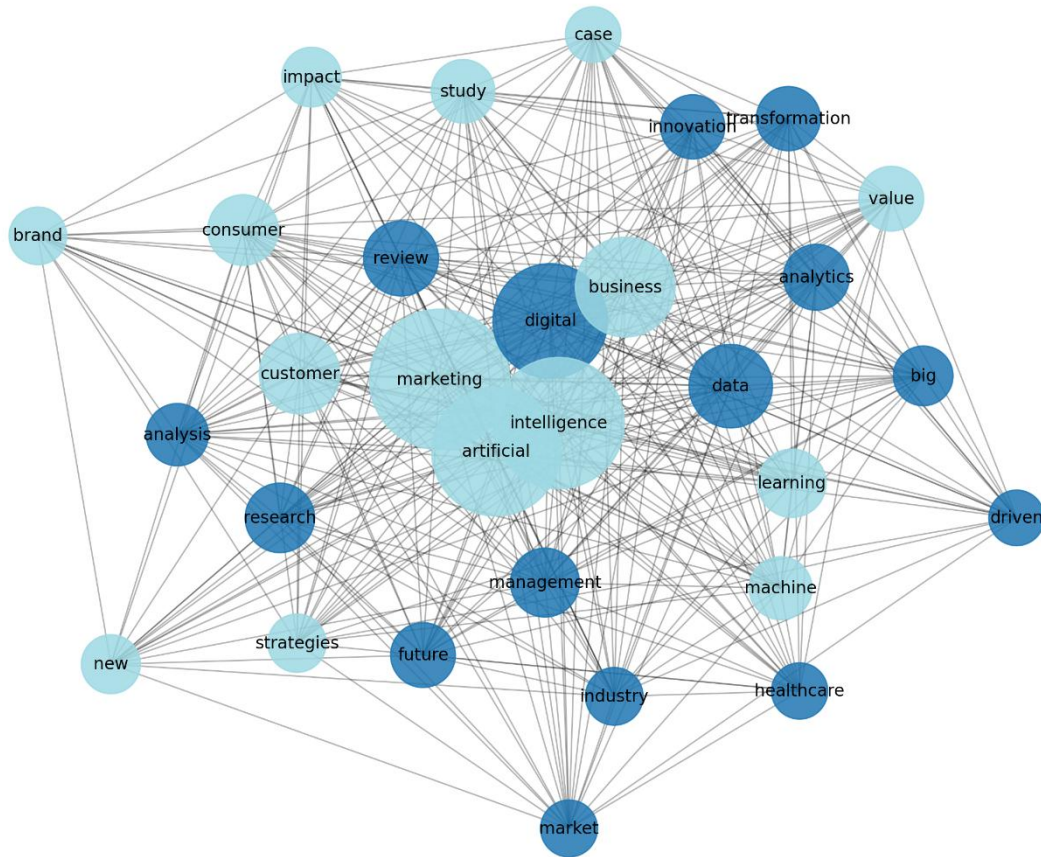
LITERATURE REVIEW:-

S.NO.	AUTHOR NAME & YEAR	TITLE	OBJECTIVE	METHODOLOGY	RESULT
1.	Sharma et al (2020)	Data-driven strategies for digital native market segmentation using clusterin	The rapid growth of internet users and social networking sites has created significant challenges for entrepreneurs and marketers.	The paper utilizes clustering techniques such as Kmeans, MiniBatch Kmeans, AGNES, and Fuzzy C-means	K means outperforms other clustering techniques in digital market segmentation. Silhouette scores: 63.90% for 2 clusters, 58.06% for 3 clusters.
2.	Mehta et al (2021)	Dynamic micro-targeting: fitness-based approach to predicting individual preference	The paper discusses the importance of intelligent customer segmentation to provide targeted and personalized products and services.	The paper employs a statistics-based approach to customer segmentation, which computes summary statistics from customer demographic and transactional data, and then partitions the customer base into segments using various clustering methods, specifically hierarchical clustering, entropy-based regression trees, and affinity propagation clustering algorithms.	Micro-targeting method outperforms direct grouping and statistics-based methods. Generates predominantly small-sized segments for better personalization

S.NO.	AUTHOR NAME & YEAR	TITLE	OBJECTIVE	METHODOLOGY	RESULT
1.	Reddy et al (2022)	<u>Pharmaceutical Marketing Segmentation in the Age of the Internet</u>	The pharmaceutical industry is transitioning towards increasingly individualized healthcare, necessitating a shift from broad market segmentation to more refined micro-segmentation.	This approach allows pharmaceutical companies to focus on individual interactions and tailor marketing strategies to meet the specific requirements of these micro-segments.	Internet enhances fine-grained market segmentation strategies. Micro-segmentation improves customer understanding and engagement
2.	Khan et al (2020)	The Impact of E-Commerce on Pharmaceutical Marketing and Branding: A Comprehensive Review	Pharmaceutical marketing is evolving with e-commerce and digital platforms, impacting branding and customer interaction. India's pharmaceutical market is substantial, with significant growth projected in biosimilars and medical devices.	It examines studies analysing the adoption of online channels, their influence on consumer Behaviour and brand perception, and the challenges and opportunities presented by this digital transformation within the pharmaceutical sector.	The integration of technology, including AI, offers opportunities for personalized outreach, but trust and reliability remain critical factors for effective digital engagement.

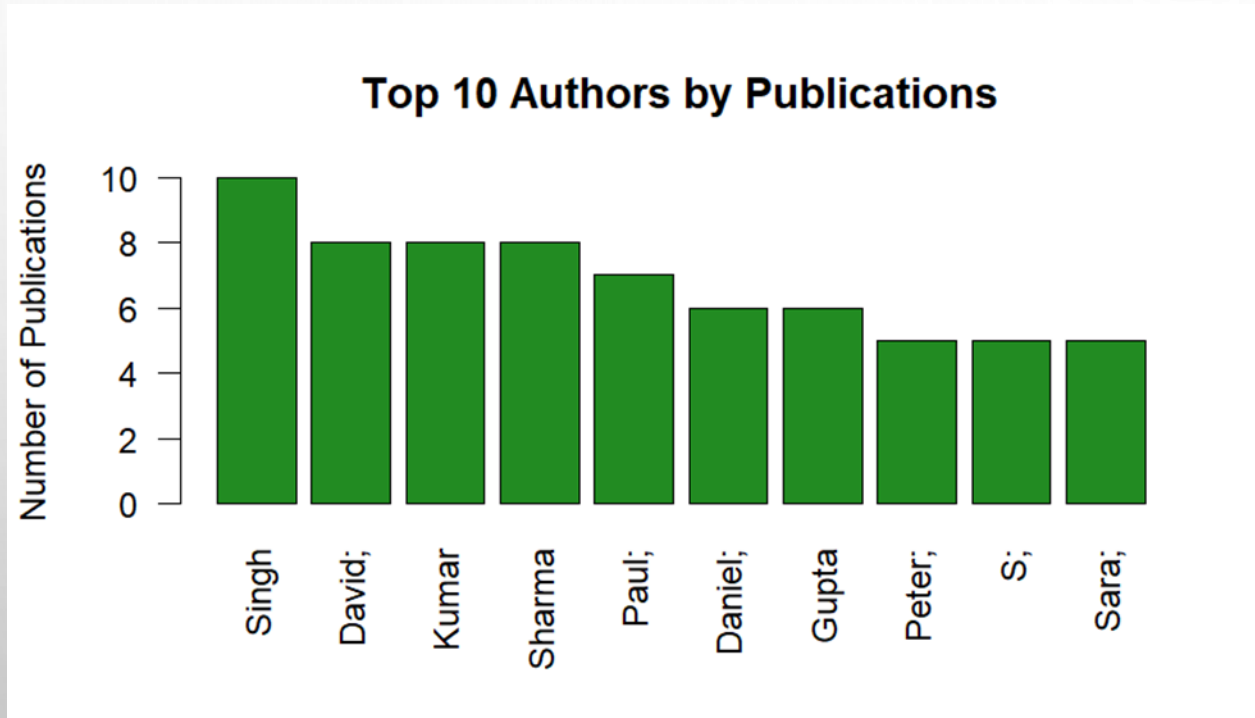
SECONDARY DATA ANALYSIS

Keyword Co-occurrence Network (Clusters Colored)



INTERPRETATION:

Each node represents a keyword, with its size proportional to its frequency and edges indicating co-occurrence. The blue cluster, with keywords like "business," "digital," "artificial intelligence," and "data," focuses on technology-driven aspects of risk communication, such as digital marketing or AI applications during the pandemic. , while edge thickness reflects the strength of co-occurrence. thick edges between "digital" and "business" indicate frequent pairing in papers.



INTERPRETATION:

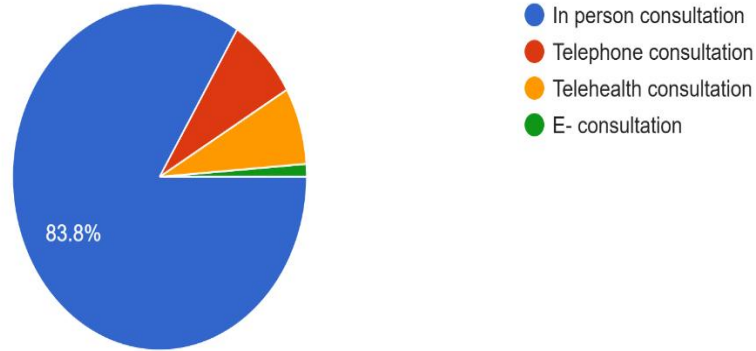
Researchers like Scar Dovi, Dwivedi, Huang, Rust, and Rosário stand out as some of the most active voices in this dataset

The titles of their works, such as *Artificial Intelligence in Service* and *Data-Driven Decision-Making in Marketing*, show they're diving into how AI shapes marketing and business

PRIMARY DATA ANALYSIS:

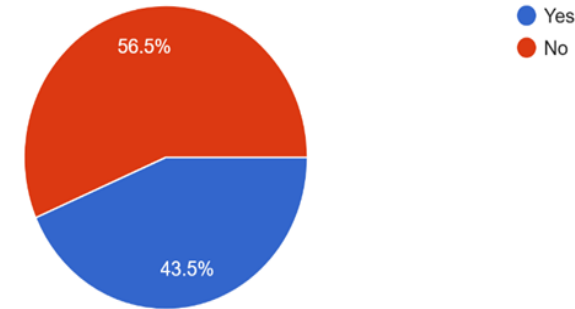
which mode of consultation did you preferred ?

167 responses



Have you ever changed your mind about a pharma OTC product based on online reviews or social media feedback?

200 responses

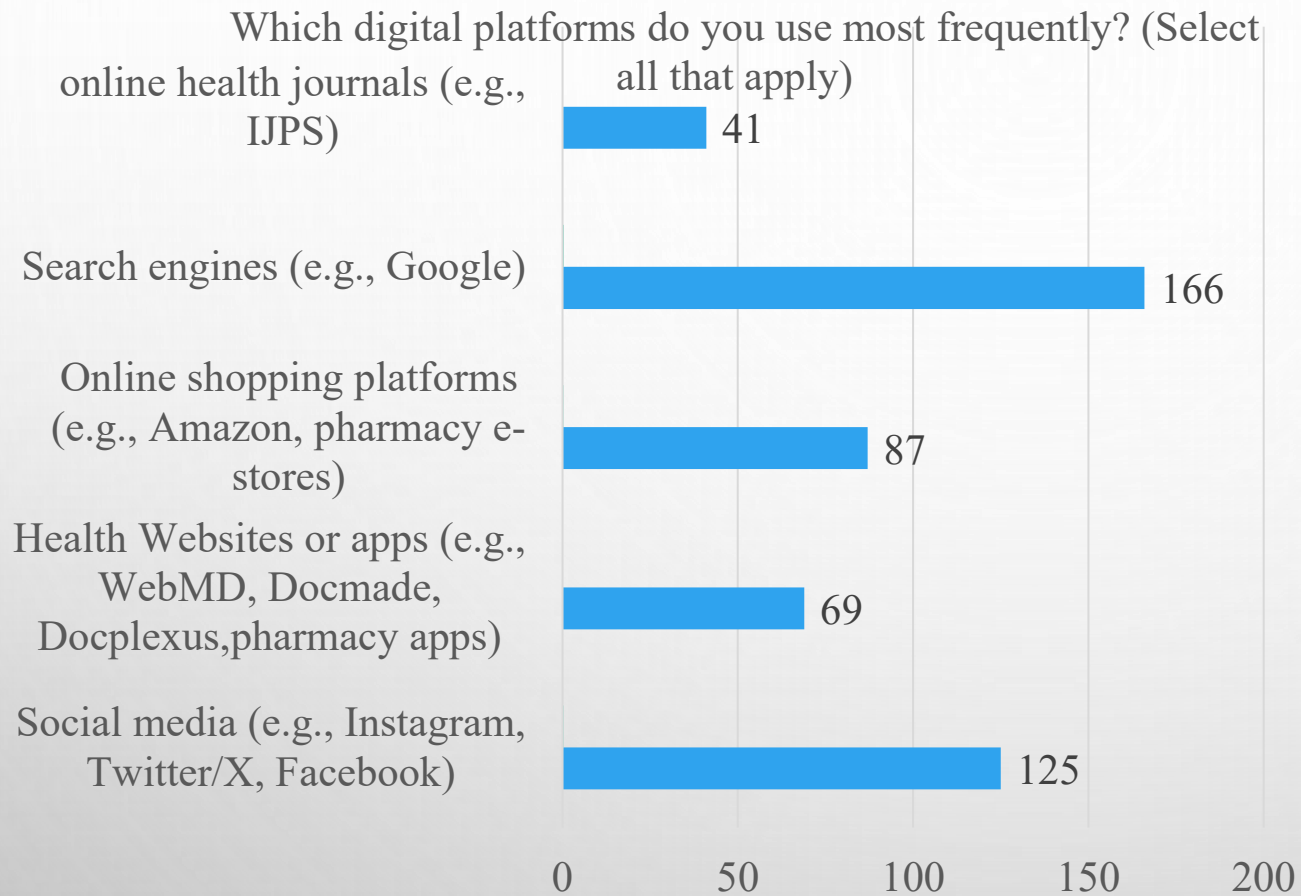


INTERPRETATION:

We can see that the 83.8% of the participants responded that the in-persona consultation is there most preferred mode of consultation. And following telephone(7.8%) and telehealth consultation (7.2%).

INTERPRETATION:

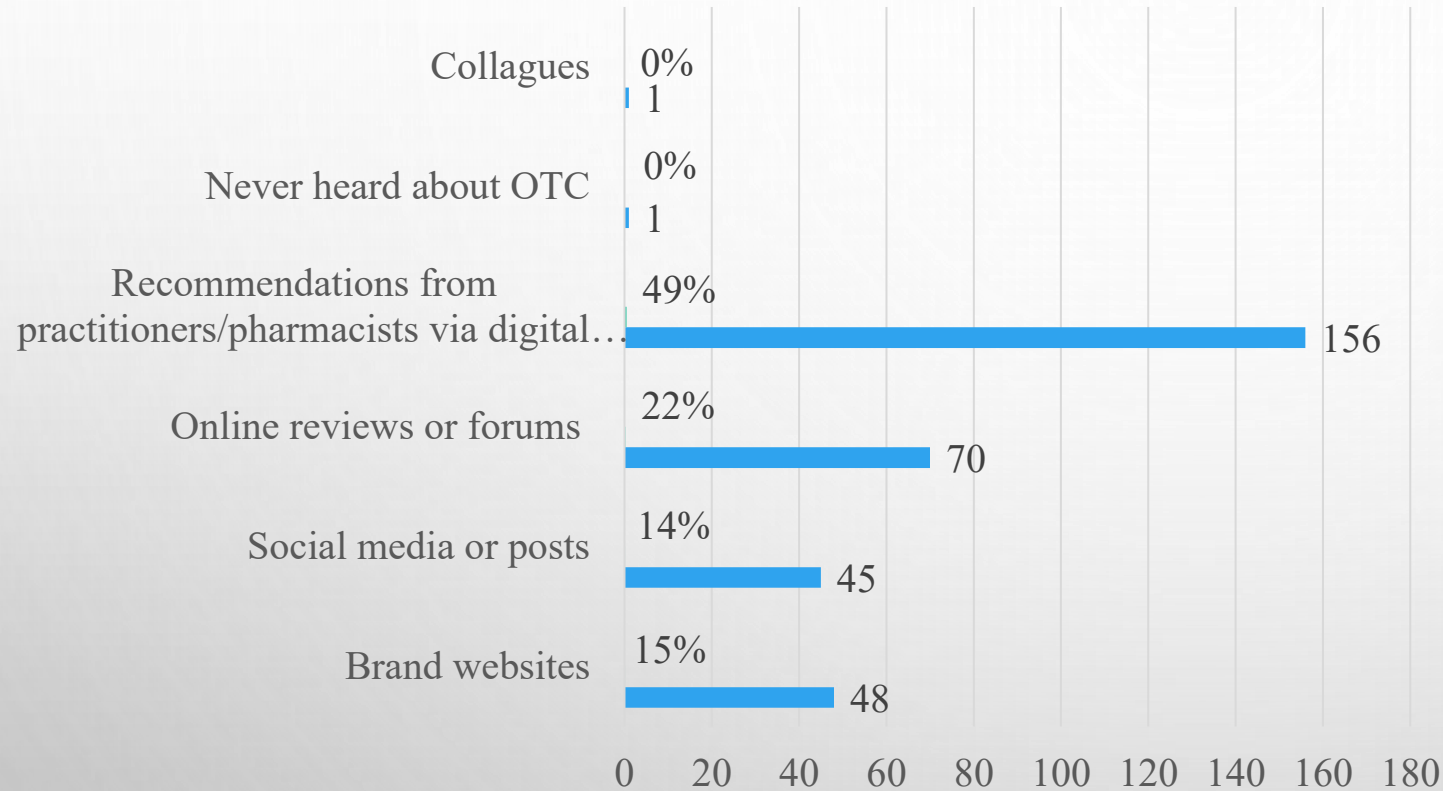
43.5% indicated that they have changed their mind based on online reviews or social media feedback, while a larger 56.5% did not. This suggests that while a considerable number of individuals are open to being swayed by online sentiment regarding otc products, a majority still rely on other factors or maintain their initial decisions.



INTERPRETATION:

As per the data, most respondents mostly used Search engines to gain information, following social media platforms such as Twitter, Instagram etc. In a moderate level, online shopping platforms and the health websites are used. Following to the lowest is online health journals.

Where do you primarily get information about pharma OTC brands?

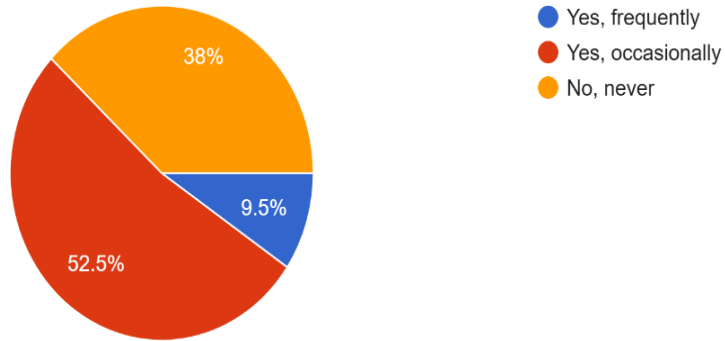


INTERPRETATION:

This chart shows that nearly half the respondents rely on digital recommendations from healthcare professionals for pharma OTC information. Online forums and brand websites follow next, while very few trust social media ads or know nothing about OTCs. It reflects a shift toward credible, expert-led digital healthcare communication

Have you ever purchased an OTC product online based on a digital advertisement or recommendation?

200 responses

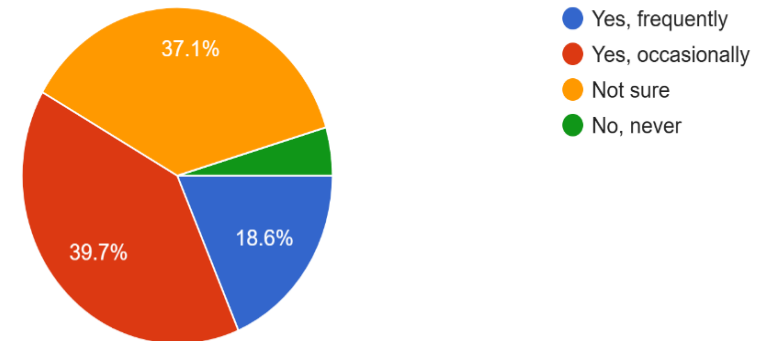


INTERPRETATION:

A significant 52.5% report having purchased an OTC product online "occasionally" based on a digital advertisement or recommendation, demonstrating the persuasive potential of online marketing efforts.

Have you ever noticed or been aware that Artificial Intelligence (AI) is being used to personalize your experience with pharmaceutical or healthcare product advertisements

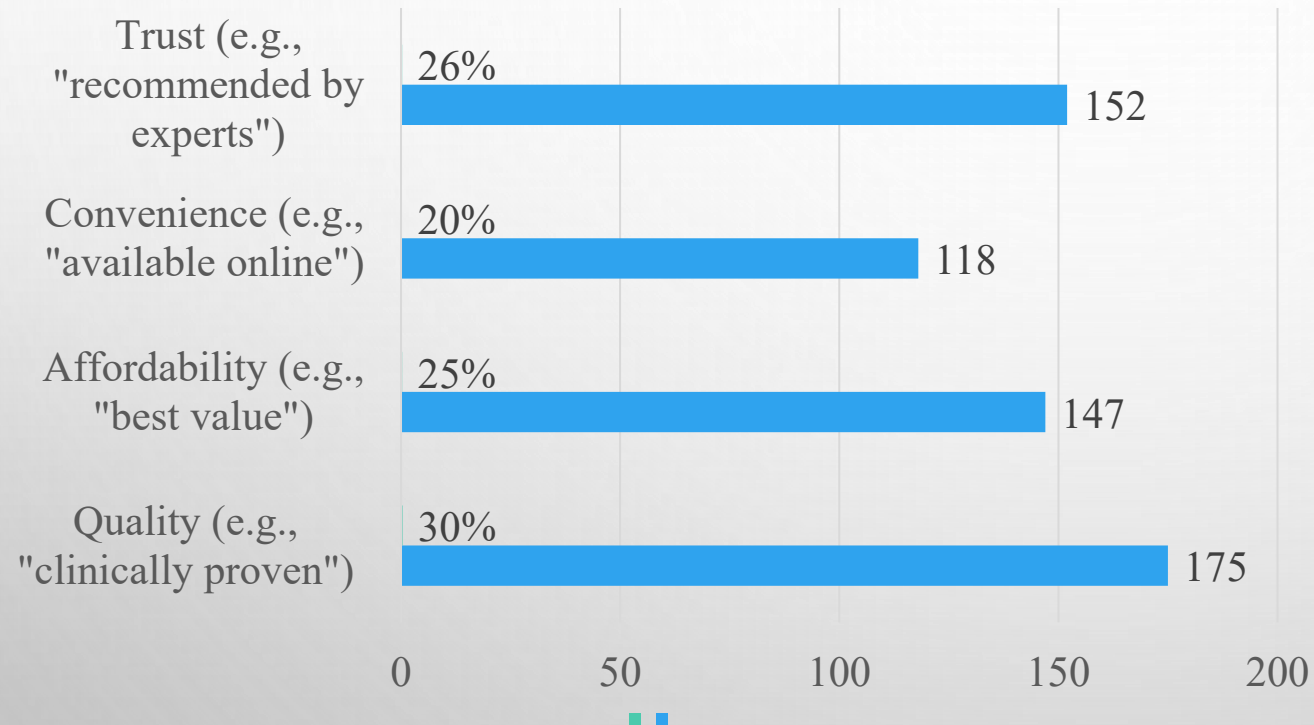
194 responses



INTERPRETATION:

A substantial 39.7% report being "not sure", Following closely, 37.1% state they have "occasionally" noticed. 18.6% report noticing it "frequently", A smaller fraction 4.6% indicate that they have never noticed or been aware of AI been used for personalisation.

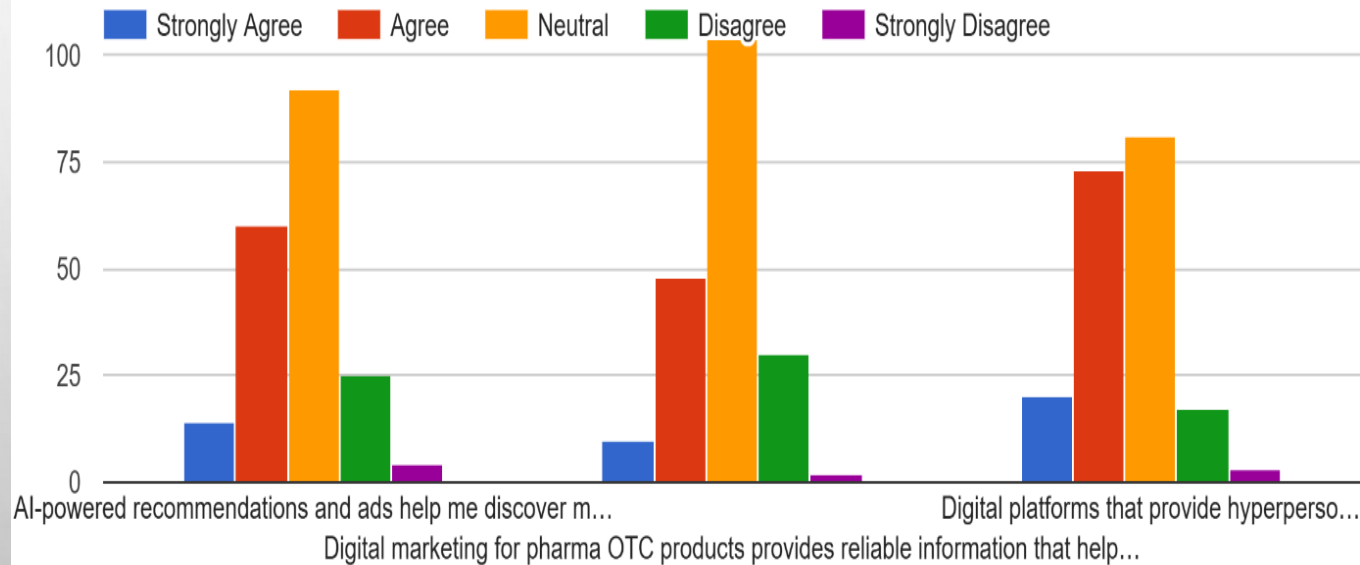
(Based on 198 responses)Which brand proposition is most appealing to you when presented digitally? (Select one)



INTERPRETATION:

- Quality is the most responded brand proposition (175 responses), then following to trusts (152 responses), then affordability and convenience where all the 4 brand propositions carries importance.

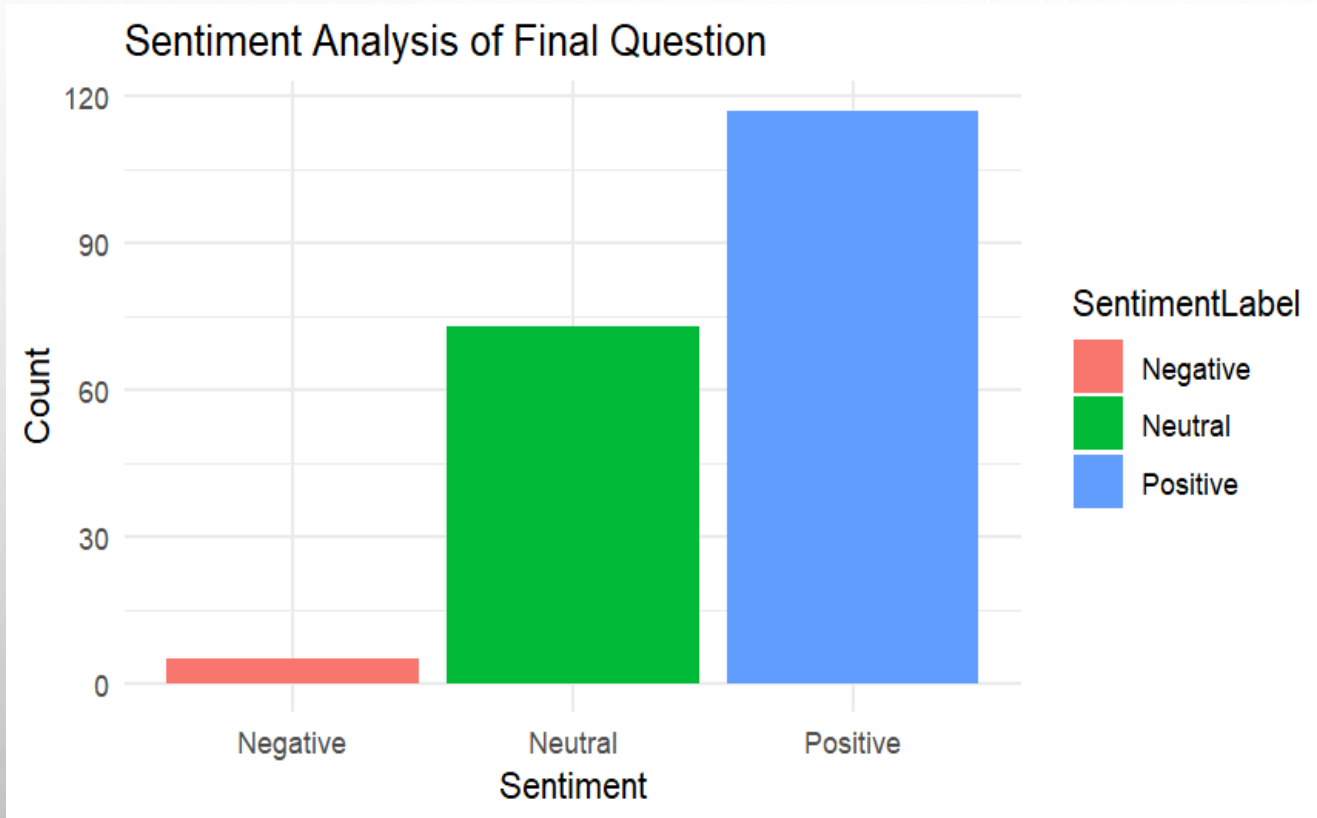
To what extent do you agree with the following statements:



INTERPRETATION:

1. Significant number of neutral choices are there after which most participants had agreed .
2. Similar to the first statement neutral choices are more following agree choices.
3. Agree choices are closer to the neutral but here similar to the above statements neutral choices are in higher proportion than other choices.

SENTIMENT ANALYSIS:-



INTERPRETATION:

Based on the data, The chart says that the positive sentiments are higher than the neutral and the negative sentiments which shows that the respondents responses are maximum in positive sentiment. The positive sentiment is near to 120 in count, neutral sentiments are near to 75 in count, and negative are lowest which is near to 5 in count.

STRATEGIES:-

- **Trustworthiness of digital marketing for OTC products. The strategy to convert trustworthiness we can:**
 - Build trust with reliable information.
- **% of respondents who have changed there mind about a pharma OTC product based on online reviews or social media feedback. The strategy to maximise the conversion is:**
 - Showcase authentic experiences.
- **% Of respondents noticed or been aware of AI been used to personalize there experience with pharmaceutical or healthcare product advertisements. The strategy for more AI awareness among people are:**
 - Raise awareness about AI in a friendly way.

CONCLUSION:-

- This study establishes that **micro segmentation driven by digital behavioural data** significantly enhances pharmaceutical marketing effectiveness. Digital platforms, especially when powered by AI and behavioural analytics, improve brand relevance and engagement. However, a strong human element remains crucial in healthcare decision-making. For successful adoption, pharmaceutical companies must blend precision targeting with ethical transparency and offline support systems.

RECOMMENDATIONS:-

- Expand AI based personalization while ensuring data privacy.
- Integrate feedback loops from online reviews into branding strategy.
- Focus on hybrid strategies combining digital outreach with physical touchpoints.

Thank
you!