To establish a prosperous career in the dental field, it is imperative for dental professionals to grasp both the theoretical and practical aspects of marketing strategies. The realm of social media presents significant potential for cost-effective dental service promotion, exerting a substantial influence on modern dental practices. This research endeavors to investigate the impact of marketing dental services, with a specific focus on the utilization of social media within the dental industry. A probability-based sampling method was employed to select three distinct dental clinics from a pool of five major cities across India. Among these, one clinic employed digital marketing for promotion, while the other two adhered to conventional marketing practices. After identifying the dental clinics, a cross-sectional study was conducted to assess the relationship between patient outcomes in digital marketing-based clinics compared to non-digital marketing-based clinics. The clinics were further evaluated and compared based on their patient outcomes over a six-month period. One-way ANOVA was employed to analyze the patient inflow across these three clinics, followed by post-hoc Turkish tests for result evaluation. The one-way ANOVA revealed that the clinic employing digital marketing exhibited the highest patient frequency. Clinically significant findings supported the efficacy of digital marketing in Clinic 1, establishing a correlation between digital marketing and improved patient outcomes within dental clinics. In conclusion, this study underscores the pivotal role of digital marketing in the dental services market, surpassing the effectiveness of conventional advertising strategies.

**Keywords:** Marketing strategies, Social media, Service promotion, Digital marketing

**INTRODUCTION**

The role of marketing in the area of dentistry has become increasingly significant, particularly in terms of its emphasis on bringing new patients to dental clinics. The increased significance of marketing can be ascribed to a decrease in patient demand for dental services, resulting in numerous dental offices working below their optimal capacity. As a result, dental practitioners have acknowledged the importance of using efficient marketing tactics to enhance patient influx. Indeed, dental marketing has emerged as a prevalent and essential element within the realm of many dental offices. Hence, it is imperative for aspiring dental practitioners seeking to create their own practices, as well as persons contemplating the acquisition of pre-existing ones. The delivery of oral health-care services is recognized by economists as being influenced by two essential components: the demand side and the supply side. The demand side of dental care involves various crucial elements, such as patient demographics, the financing of care, the demand for dental services, and the financial capacity of patients to access and afford the necessary care. On the other hand, the supply side encompasses several factors such as the accessibility and characteristics of dental practitioners, their working hours, the range of treatment choices offered, and the composition of the practice personnel. The marketing of dental services differs from other healthcare marketing tactics primarily as a result of the distinct attributes inherent in the oral healthcare industry.
The incorporation of the Internet and the World Wide Web into commercial operations has been a fundamental aspect of the business environment for almost 25 years. The contemporary era has experienced a remarkable shift in the realm of commerce, characterized by the swift rise of colossal multinational enterprises that were relatively unknown a mere twenty years before. Prominent entities such as Google, Facebook, Amazon, Alibaba, eBay, and Uber have emerged as significant participants in the contemporary global economy. In addition, the rapid expansion of digital technologies and gadgets, including smartphones, smart products, the Internet of Things (IoT), Artificial Intelligence (AI), and deep learning, holds the potential to significantly transform the daily experiences of consumers in the foreseeable future. Given the significant transformations occurring in the realms of business and technology, the primary aim of this research endeavor is to examine the influence of digital marketing on patient outcomes inside dental clinics. Digital marketing comprises a wide range of online strategies and approaches that are designed to effectively reach and engage with potential patients through various digital platforms. These may encompass online platforms like as websites, social networking platforms, email marketing, search engine optimization, and other diverse digital advertising techniques. The study's significance rests in its potential to provide insights into the impact of digital marketing on the decision-making process and experiences of those seeking dental care. In light of patients' growing reliance on online resources for healthcare information and decision-making, it is crucial for dental professionals to comprehend the influence of their online presence and marketing endeavors on patient outcomes. This study aims to provide significant contributions to the fields of dentistry and marketing by delivering useful insights on the effective utilization of digital marketing strategies. The findings of this investigation will provide guidance to dental practitioners and marketers on how to optimize patient pleasure, improve accessibility, and increase overall oral health results. The transformation of marketing strategies within the dental industry exemplifies the shifting dynamics of patient preferences, service availability, and the impact of digital technologies. The incorporation of dental marketing has become an indispensable component in effectively managing a thriving dental office, and comprehending its influence is imperative for both dental professionals and scholars. The present research, focusing on the impact of digital marketing on patient outcomes, is expected to yield significant findings that contribute to the understanding of the dynamic field of dental healthcare.

OBJECTIVES OF THE STUDY:

1. To assess and compare the patient inflow at three different medical clinics located in five cities.
2. To evaluate the impact of digital marketing on clinic 1’s patient acquisition compared to clinics 2 and 3 using conventional advertising methods.
3. To determine the clinical significance of patient inflow differences between the clinics in the specified cities.

4. To understand the variations in patient visits across different locations.

RESEARCH QUESTIONS:

1. What are the patient visit patterns in terms of numbers at three different medical clinics across Jaipur, Ahmedabad, Nagpur, Pune, and Hyderabad?

2. How does the utilization of digital marketing at clinic 1 affect patient inflow when compared to clinics 2 and 3, which rely on traditional advertising methods?

3. Is there a statistically significant difference in patient inflow among these clinics in the specified cities?

4. Are there location-specific factors that influence patient visits to these clinics?

HYPOTHESES:

1. Null Hypothesis (H0): There is no significant difference in patient inflow between clinic 1 (digitally marketed) and clinics 2 and 3 (conventional advertising) in the specified cities.
   - Alternative Hypothesis (H1): There is a significant difference in patient inflow between clinic 1 and clinics 2 and 3 in the specified cities.

2. Null Hypothesis (H0): The location (city) does not have a significant impact on patient visits across the three clinics.
   - Alternative Hypothesis (H1): The location significantly affects patient visits to the clinics.

3. Null Hypothesis (H0): The mean outpatient department (OPD) frequencies for clinic 1, clinic 2, and clinic 3 are equal in all cities.
   - Alternative Hypothesis (H1): The mean OPD frequencies for these clinics are not equal in all cities.

SCOPE OF THE STUDY: The scope of the study is focused on the assessment of patient inflow at three medical clinics across five cities. Specifically, the study aims to understand the impact of digital marketing (utilized by clinic 1) versus conventional advertising methods (employed by clinics 2 and 3) on patient acquisition. The study also examines the clinical significance of these variations in patient visits. The research is limited to the specified cities: Jaipur, Ahmedabad, Nagpur, Pune, and Hyderabad, and does not extend beyond the data collected during a six-month period.

MATERIALS AND METHODS

We divided the dental clinics into two distinct categories for our study. The first category primarily relied on digital marketing strategies, while the second category utilized conventional marketing methods.

To select clinics for the conventional marketing category, we established specific criteria:

1. Dental clinicians in this category were not actively present on social networking sites. They had no active profiles on platforms like Facebook, Instagram, Twitter, or LinkedIn.

2. These dental clinics did not have their own websites, and they did not maintain an online presence through a dedicated web portal.

3. There was no visible promotion or advertisement of the dental clinician or the dental clinic on the internet. This means they did not engage in web-based marketing or advertising.
4. Dental clinicians in this category did not use email for scheduling appointments with their patients. Conversely, in the digital marketing category, we selected one clinic from each of the five major cities in India. These clinics heavily relied on digital or multimedia marketing strategies to attract and engage with their patients.

It's important to note that appointment scheduling through text messages, voicemail, and phone calls was considered a conventional method in our study, even though it involved electronic communication. This was done to ensure that the results were not skewed by different appointment practices, and it allowed patients to receive various types of information, such as updates on clinic services, pricing, discounts, appointment validation, and general information.

Our study was conducted over a six-month period in five major Indian cities: Jaipur, Ahmedabad, Nagpur, Pune, and Hyderabad. From each of these cities, we selected three dental clinics for the study. Among these three, two clinics were categorized as reliant on conventional marketing methods, while one clinic heavily depended on digital marketing strategies.

After collecting the data, we performed a statistical analysis using a one-way analysis of variance (ANOVA) with a post-hoc Turkish test to compare the results across the three groups of clinics. This analysis allowed us to evaluate the effectiveness of both digital and conventional marketing strategies in the context of dental clinics.

RESULTS AND DISCUSSION

Following a six-month period of data gathering at all three medical clinics, some noteworthy tendencies were found. A total of 3,804 people availed medical services at clinic 1, where digital marketing methods were employed. In contrast, Clinic 2 and Clinic 3 were attended by 3,118 and 3,242 patients, respectively, in various cities like as Jaipur, Ahmedabad, Nagpur, Pune, and Hyderabad. Clinic 1, which has used digital marketing strategies, demonstrated a significant advantage in terms of patient influx across all five cities. A retrospective one-way analysis of variance (ANOVA) was conducted, which indicated a statistically significant increase in patient inflow as a result of digital marketing initiatives. Clinic 1 exhibited a substantial disparity in patient volume compared to clinics 2 and 3. The present analysis also elucidated the clinical significance of each clinic located in the five cities, thereby providing insights into the relatively lower performance of clinics 2 and 3 in terms of recruiting new cases. This underperformance can be attributed to their utilization of conventional promotional strategies.
The statistical analysis data provided in Table 1 displays the average frequency of outpatient department (OPD) visits, standard deviation (SD), p-values, and post-hoc comparisons for each clinic across the five cities. The data shown below illustrates the distribution of patients across three clinics in each of the five cities, expressed as percentages.

In the city of Jaipur, for example: Clinic 1 exhibited an average outpatient department (OPD) frequency of 91.83, as determined by statistical analysis. The p-value associated with this finding was found to be less than 0.001. The results of the post hoc analysis revealed that clinic 1 exhibited a higher patient influx compared to clinics 2 and 3.

In the city of Ahmedabad: Clinic 1 exhibited a mean outpatient department (OPD) frequency of 113.17, accompanied by a p-value of 0.047. This p-value suggests that Clinic 1 drew a greater number of patients compared to Clinic 3. The second clinic had an average outpatient department (OPD) frequency of 92.83. The third clinic exhibited an average outpatient department (OPD) frequency of 92.67.

In the city of Nagpur: Clinic 1 exhibited a mean outpatient department (OPD) frequency of 139.00, accompanied by a p-value of 0.001. This statistical significance suggests that Clinic 1 drew a greater number of patients compared to
clinics 2 and 3. The second clinic had an average outpatient department (OPD) frequency of 116.33. The third clinic had an average outpatient department (OPD) frequency of 112.83.

In the city of Pune: Clinic 1 exhibited a mean outpatient department (OPD) frequency of 136.17, which was statistically significant with a p-value of 0.002. This finding indicates that Clinic 1 experienced a greater influx of patients compared to clinics 2 and 3. The second clinic had an average outpatient department (OPD) frequency of 113.00. Clinic 3 exhibited an average outpatient department (OPD) frequency of 114.17.

In the city of Hyderabad: Clinic 1 exhibited a mean outpatient department (OPD) frequency of 153.33, accompanied by a p-value of 0.002, suggesting a higher patient influx compared to clinic 2. The second clinic exhibited a mean outpatient department (OPD) frequency of 126.50. The third clinic had an average outpatient department (OPD) frequency of 148.33.

The aforementioned results collectively underscore the fact that the digital marketing strategy employed by clinic 1 yielded a substantial rise in patient influx throughout the five cities, distinguishing it from clinics 2 and 3 that predominantly depended on conventional advertising techniques.

**DISCUSSION:**

In the realm of clinic marketing, the dental service occupies a paramount role as it directly addresses clients’ needs and significantly influences client-provider relationships. The quality of dental services is pivotal, as subpar service fails to bring meaningful value to clients, ultimately diminishing the clinic’s reputation. In the contemporary landscape, there is a growing imperative for not only providing exceptional dental services but also for employing effective digital marketing strategies to introduce clinics to a global audience.

According to Paim et al. and Paranhos et al., marketing encompasses a broad array of studies, strategies, and practices aimed at launching products or services to the public, tailored to their specific needs, thereby ensuring long-term success in the market and, consequently, the prosperity of the company.

Our study findings indicate a surge in patient interest toward Clinic 1, which heavily utilized digital marketing strategies. India, being a rapidly growing economy, has only recently witnessed the emergence of digital marketing as a significant player in the field. While many dental clinics are adapting to this changing landscape, it may take some time before they can penetrate the international market. This accounts for Clinics 2 and 3, which primarily relied on conventional advertising methods but lagged behind in patient influx. Notably, a drawback associated with digital marketing campaigns is the absence of face-to-face contact, which can limit the ability to persuade potential patients to try out the dental services offered.

In the context of trending digital marketing, Rollsz et al. emphasize that Facebook is the dominant social network worldwide, followed closely by WhatsApp. However, Lima et al. contend that various market sectors, including dentistry, are increasingly leveraging Facebook and Instagram as potent marketing tools. The use of social media, though somewhat limited, holds promise for facilitating communication between dentists and their patients, potentially extending the patient-dentist relationship beyond the clinical setting.

Furthermore, social media offers a platform to address critical issues such as post-treatment care and dental anxiety. Dental anxiety is a persistent challenge in dentistry, often resulting in sleeplessness, reluctance to form interpersonal relationships, and workplace difficulties. It serves as a barrier to patients seeking necessary dental treatments, with the prevalence of dental phobias remaining largely unchanged over the last two decades. Addressing this issue demands professional assistance, particularly prior to clinic visits. Social media can enable dental professionals to provide this support outside the clinical environment. Certain features of social media, including gamification and engaging website design, can be instrumental in informing and educating patients about critical health-related issues, thereby enhancing trust and appreciation of the service received.
A significant majority of studies advocate the utilization of social media in healthcare for communication. Recent data also demonstrate the influence of social media on the medical field, enabling communication between practitioners and patients. Orthodontic practices use social media to connect with patients, establish a reputable presence, and attract new patients. Additionally, YouTube plays a pivotal role by showcasing a variety of content, from educational materials to clinical case presentations and opinion-forming processes.

Presently, dental services are predominantly advertised through social media marketing, which is comparatively cost-effective and efficient. Platforms like Twitter are employed to gather both positive and negative perceptions about dental services, while Facebook is recognized as the primary source of social marketing, followed by Twitter. Once consumers become fans of a product or service on social media, they are more likely to make purchases. As a result, social media marketing has emerged as the preferred method for promoting dental services.

In recent years, social marketing has surpassed traditional marketing strategies, as exemplified by Markham et al.’s use of social media to share clinical information with colleagues. Additionally, social media can play a role in evaluating a professional's reputation, a critical element when choosing an orthodontist, aside from cost and recommendations. While patient satisfaction surveys can be used to rate service providers, they may fall short in capturing crucial details. Social media platforms, on the other hand, provide authentic patient experiences, encompassing both positive and negative aspects.

CONCLUSION:

This study underscores the necessity of embracing digital methods to promote medical care services as an effective strategy for expanding a healthcare business. A strategic approach should focus on attracting new patients and delivering high-quality healthcare services that ensure patient satisfaction and the likelihood of them recommending the healthcare facility to others. Social networking sites have emerged as a crucial tool in this endeavor, as they facilitate targeted promotion and have been shown to generate high responses.

LIMITATIONS OF THE STUDY:

While this study sheds light on the advantages of digital marketing in the healthcare sector, it is essential to acknowledge its limitations. The research is limited in scope and may not capture the full extent of the complexities associated with dental clinic marketing. Furthermore, the study relies on existing literature and may not encompass all the nuances of real-world clinical practice. The findings may be subject to bias and the evolving nature of digital marketing trends.

RECOMMENDATIONS:

In light of the findings and limitations, it is recommended that future research in this area adopts a more comprehensive and robust approach, incorporating real-world case studies and direct data collection. Additionally, dental clinics should consider expanding their digital marketing efforts, leveraging social media platforms to connect with patients and provide valuable information. To overcome the limitations of face-to-face contact, innovative ways of engaging potential patients should be explored, such as virtual consultations. By continuously monitoring and adapting to the evolving digital landscape, dental clinics can position themselves for success in an increasingly competitive market.

REFERENCES


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