British Journal of Healthcare and Medical Research - Vol. 12, No. 03
Publication Date: May 9, 2025
DOI:10.14738/bjhr.1203.18768.
Bayram, E. & Bayram, H. M. (2025). Endodontists on Instagram and YouTube: Content Strategies and Engagement. British Journal of Healthcare and Medical Research, Vol - 12(03). 40-45.

Endodontists on Instagram and YouTube: Content Strategies and Engagement

E. Bayram
Tokat Gaziosmanpasa University,
Faculty of Dentistry, Department of Endodontics

H. M. Bayram
Tokat Gaziosmanpasa University,
Faculty of Dentistry, Department of Endodontics

ABSTRACT

Objective: This study aimed to analyze the content shared by endodontists with a high number of followers on Instagram and YouTube platforms to identify which types of content generate higher audience engagement and whether there is a significant relationship between follower count and content type. Materials and Methods: Endodontists with at least 20,000 Instagram followers and 5,000 YouTube subscribers were identified through AI-assisted screening. All posts shared by these accounts were examined, and the top ten posts with the highest likes for each account were selected. The posts were classified into four categories: educational content, clinical case presentations, technology/product promotions, and others. Statistical analyses were conducted using SPSS v19.0, with a significance level set at $p<0.05$. Results: Clinical case presentations achieved the highest average number of likes on both the Instagram and YouTube platforms. Educational content ranked second, while technology and product promotions exhibited the lowest engagement rates. Furthermore, a strong positive correlation was found between academic content and the number of followers on YouTube ($r=0.948$; $p=0.050$). Conclusion: Clinical case presentations and educational content are the most effective engagement tools for endodontists on social media. It is recommended that endodontists prioritize these types of content when developing effective social media strategies.

Keywords: Endodontics, Social Media, Instagram, YouTube.

INTRODUCTION

Social media has begun to play a significant role in delivering and promoting healthcare services and has also become an effective tool in dentistry [1]. In particular, platforms such as Instagram and YouTube have provided new opportunities for dentists to share information with their colleagues and to engage with patients more easily [2]. Through these platforms, the flow of information has transformed the traditional patient-dentist relationship into a more dynamic and bidirectional communication model [2].

Previous studies have demonstrated that social media offers various opportunities for patient education and professional development [3]. However, factors such as the quality of the content, the mode of presentation, and adherence to ethical standards are critical elements

that influence the effectiveness of social media use [4]. Analyses conducted specifically in dentistry have reported that case presentations with strong visual components and educational content, in particular, lead to higher levels of audience engagement [5]. Endodontic specialists have also used social media to share their professional knowledge and clinical achievements with a broader audience [6]. Despite the increasing use of social media among dental professionals, there is limited empirical evidence regarding which specific content types drive user engagement, particularly among endodontists.

In this context, our study aims to analyze the social media posts of endodontists with at least 20000 followers on Instagram and at least 5000 subscribers on YouTube, to identify the types of posts that receive the relationships between follower count and content type.

MATERIAL-METHOD

This study is a cross-sectional descriptive content analysis encompassing the quantitative and qualitative evaluation of publicly available posts shared on Instagram and YouTube. The study used only publicly available data, adhering to ethical standards for social media research. Only publicly accessible data were used; no personal identifying information or private messages were collected. The sample size was calculated using G*Power 3.1 based on the effect size observed in pilot data (f = 0.30), indicating that a minimum of 92 posts per category (≥ 368 posts in total) would be required to achieve 80% power. The review period was limited to posts shared between January 1, 2024, and December 31, 2024. The research report was prepared using the STROBE checklist. Data were extracted using the Instagram Graph API and the YouTube Data API v3 in a Python 3.11 environment.

Profile biographies and text content were vectorized using the OpenAI text-embedding-3-small model, and semantic searches were conducted using keywords such as “endodontist,” “root canal specialist,” “Endodonti uzmanı” and “MDS endodontics.”

The inclusion and exclusion criteria were defined as follows:

Inclusion Criteria:

- Instagram accounts with ≥ 20,000 followers and ≥ 50 posts,
- YouTube accounts with ≥ 5,000 subscribers and ≥ 10 videos,
- Verification of endodontic specialization either in the profile biography or through external sources (e.g., clinic websites, university staff directories), public accounts.

Exclusion Criteria:

Suspected bot accounts with a follower-to-like ratio of <1%,
Duplicate accounts (if a practitioner had multiple accounts, the most active one was included).

Verification Process:

Two independent reviewers (E.B. and H.M.B.) compiled separate account lists.
For each account, the top-liked posts were selected to construct the sample.
When duplicate content across platforms was detected (e.g., the same YouTube video edited into an Instagram reel), the content was attributed to the platform where it was first published, and repeated entries were excluded.

URL: http://dx.doi.org/10.14738/bjhr.1203.18768.

Based on a preliminary literature review [2, 4, 7], four main content categories were defined:

- *Educational Content*: Procedural explanations, clinical tips, infographics.
- *Case Reports:* Before-and-after clinical images, radiographs, treatment protocols.
- *Technology/Product Promotion:* Device demonstrations, sponsored content, conference promotions.
- *Other:* Personal posts, social events, non-clinical content.

After achieving over 90% agreement during trial runs, two trained researchers categorized each post using NVivo 14 software. Inter-researchers' reliability was strong, with a Cohen's κ of 0.87.

Statistical analyses were conducted using IBM SPSS Statistics version 19.0. Descriptive statistics were presented as median (interquartile range, IQR) and percentage distributions. The normality of data distribution was assessed using the Shapiro–Wilk test. For comparisons across categories, the Kruskal–Wallis H test was used under non-parametric conditions, followed by post hoc pairwise comparisons with Dunn–Bonferroni correction where appropriate. Differences between the Instagram and YouTube platforms were evaluated using the Mann–Whitney U test. Predictors of engagement rate were analyzed using multiple linear regression, with the dependent variable being the log-transformed number of likes. Statistical significance was set at $p \leq 0.05$.

RESULTS

Descriptive data for each platform are presented in Table 1. A total of 150 posts were included in the study, comprising 100 posts from Instagram and 50 videos from YouTube. The analyses comprehensively examined the platforms' content profiles, engagement metrics, and the relationships between follower counts. An average of 1,235.10 posts and 50,940 followers per account were observed on Instagram. YouTube recorded an average of 199.00 videos and 27,284 subscribers per channel. The high variance observed in the number of posts and follower counts on Instagram suggests that some accounts target a niche clinical audience, whereas others reach a broader public audience. In contrast, a more homogeneous distribution was observed on YouTube. The distribution of content categories is presented in Table 2. On both platforms, "Case Report" posts accounted for the most significant proportion, while "Technology/Product Promotion" posts had the smallest share. The proportion of educational content was higher on YouTube than on Instagram, suggesting that video-based educational materials are more favored on the YouTube platform.

The correlation between follower count and number of likes is presented in Table 3. The relationship between follower count and number of likes was evaluated using the Pearson correlation coefficient and the significance level. Educational content on YouTube demonstrated a strong correlation between follower count and number of likes; this association was statistically significant. Technology/Product Promotion posts also exhibited a high positive correlation trend in the combined analysis and on Instagram; however, this correlation did not reach statistical significance ($p > 0.05$).

The average number of likes was generally slightly higher on YouTube than on Instagram, which is particularly notable in the "Case Report" and "Educational" categories. On Instagram,

engagement with "Other" content was more variable than on YouTube, indicating fluctuations in audience interest across different accounts. Correlation analyses revealed that educational content and technology/product promotions achieved higher engagement among accounts with larger follower bases.

Table 1: Descriptive Statistics by Platform

Category	Instagram Mean	Instagram SD	Instagram Min	Instagram Max	YouTube Mean	YouTube SD	YouTube Min	YouTube Max
Education	4.86	3.44	1.00	9.00	5.25	2.22	3.00	8.00
Case Report	5.71	3.45	1.00	10.00	6.67	3.06	4.00	10.00
Technology / Product Promotion	3.33	2.31	2.00	6.00	1.50	0.71	1.00	2.00
Other	2.67	1.97	1.00	6.00	2.00	0.00	2.00	2.00
Total Posts	1 235.10	941.68	131.00	2 689.00	199.00	219.33	49.00	587.00
Follower Count	50 940.00	18 404.84	22 700.00	73 000.00	27 284.00	22 361.78	8 520.00	64 400.00

Table 2: Distribution of Top-Liked Posts by Category

Category	Instagram n (%)	YouTube n (%)
Education	34 (34%)	21 (42%)
Case Report	40 (40%)	20 (40%)
Technology/Product Promotion	10 (10%)	3 (6%)
Other	16 (16%)	6 (12%)

Table 3: Correlation Between Follower Count and Likes

Category	Platform	Pearson's r	p-value
Education	Combined	0.551	0.079
Case Report	Combined	-0.343	0.331
Technology/Product Promotion	Combined	0.830	0.082
Other	Combined	-0.021	0.958
Education	Instagram Only	0.567	0.185
Case Report	Instagram Only	-0.395	0.381
Technology/Product Promotion	Instagram Only	0.765	0.445
Other	Instagram Only	-0.789	0.325
Education	YouTube Only	0.948	0.050
Case Report	YouTube Only	-0.027	0.983
Technology/Product Promotion	YouTube Only	0.999	-
Other	YouTube Only	-	-

Tartisma

In recent years, the increasing use of social media in the healthcare sector has also led to significant changes in dentistry [1]. In particular, endodontic specialists have been utilizing social media platforms to showcase their clinical successes and promote patient education, facilitate peer-to-peer knowledge sharing, and build brand awareness [2]. Studies have shown that informative content shared through social media offers essential advantages in fostering patient loyalty and attracting new patients [7].

Social media has facilitated the dissemination of clinical information visually and rapidly, making access to knowledge easier for patients and healthcare professionals [8]. With their

URL: http://dx.doi.org/10.14738/bjhr.1203.18768.

strong focus on visual content, platforms such as Instagram and YouTube have been reported to generate significant engagement, particularly in health fields with a high aesthetic component, such as dental practices [9]. In this context, systematically analyzing shared content is essential to identify which posts attract greater interest.

This study analyzed the content categories and engagement levels based on posts shared by endodontic specialists with many followers on social media. Four main categories were defined: educational content, clinical case presentations, technology and product promotions, and other posts. These categories were established in alignment with previous social media content analysis studies [2, 4, 9].

When examining engagement levels by content type, the "Case Report" category achieved the highest average number of likes on both Instagram and YouTube platforms. This finding supports the notion that clinical success stories and visual outcomes substantially impact audience engagement. Similarly, in a study by Freire et al., it was reported that the presence of dental clinics on social media platforms influenced patients' clinical choices [3]. However, as emphasized by Fitzpatrick et al., patient privacy and ethical boundaries must be carefully maintained, particularly when sharing clinical content [9]. Thus, although case presentations can generate high engagement, ensuring that patient confidentiality is rigorously protected is critical.

Educational content generated lower engagement than case reports, but higher engagement than technology promotions and other types of posts. This suggests that users are interested in educational content for knowledge acquisition and professional development purposes, but are more interested in concrete clinical success stories.

When comparing the two platforms, YouTube achieved higher average likes, particularly for educational content and case reports. Additionally, it can be observed that Instagram users prefer shorter, more visually focused content, which allows even personal posts to generate a certain level of engagement. However, content based on visual appeal rather than detailed technical explanations is more prominently favored on Instagram.

When examining the relationship between follower count and content types, a moderate positive correlation was found between follower count and educational content. When specifically analyzing YouTube, a robust correlation was observed between educational content and follower count. This result suggests that educational content plays a significant role in subscriber growth on YouTube and that establishing oneself as a reliable source of information is crucial for platform growth strategies.

The findings of this study are consistent with the existing literature regarding the use of social media in the field of dentistry. In particular, Parmar et al. reported that patients show greater interest in clinical success stories and information-focused content on social media [10]. Ventola emphasized the importance of professional conduct and ethical sensitivity in social media use [1]. Chen et al. noted that social media is an effective tool for oral health education and that visual content enhances user engagement [2]. Ooi and Kelleher reported that case presentations attract high interest on Instagram [7]. Similarly, Ho et al. highlighted the impact of treatment experiences shared on social media on patients' decision-making processes [5].

Within the limitations of this study, only accounts exceeding a certain follower threshold were included, thereby excluding smaller-scale accounts. Additionally, the number of likes was used as the sole measure of engagement, while other interaction types, such as comments and shares, were not evaluated. Future studies are recommended to utilize larger datasets and perform multidimensional user engagement analyses.

CONCLUSION

This study demonstrated that the types of social media content shared by endodontic specialists significantly influence audience engagement. Clinical case presentations and educational content achieved the highest engagement rates across both platforms. Although an increase in follower count generally led to higher engagement, this effect appeared to plateau beyond a certain threshold. Producing reliable and authentic content on social media is critically important for enhancing digital visibility and strengthening professional reputation.

References

1. Ventola CL: Social media and health care professionals: benefits, risks, and best practices. P & T : a peer-reviewed journal for formulary management 2014, 39(7):491-520.

2. Chen S, Xing X, Li Z, Zhang W: Scoping review on the role of social media in oral health promotion. European Review for Medical & Pharmacological Sciences 2022, 26(22).

3. Freire Y, Sánchez MG, Suárez A, Joves G, Nowak M, Díaz-Flores García V: Influence of the use of social media on patients changing dental practice: a web-based questionnaire study. BMC oral health 2023, 23(1):365.

4. Parmar N, Dong L, Eisingerich AB: Connecting With Your Dentist on Facebook: Patients' and Dentists' Attitudes Towards Social Media Usage in Dentistry. Journal of medical Internet research 2018, 20(6):e10109.

5. Ho A, McGrath C, Mattheos N: Social media patient testimonials in implant dentistry: information or misinformation? Clinical oral implants research 2017, 28(7):791-800.

6. Jung MJ, Seo MS: Assessment of reliability and information quality of YouTube videos about root canal treatment after 2016. BMC oral health 2022, 22(1):494.

7. Ooi HL, Kelleher MGD: Instagram Dentistry. Prim Dent J 2021, 10(1):13-19.

8. Chen S, Xing X, Li Z, Zhang W: Scoping review on the role of social media in oral health promotion. European review for medical and pharmacological sciences 2022, 26(22):8256-8264.

9. Fitzpatrick SG: Evolving patient privacy standards in publishing and social media. Oral surgery, oral medicine, oral pathology and oral radiology 2024, 138(4):459-461.

10. Parmar N, Dong L, Eisingerich AB: Connecting with your dentist on facebook: patients' and dentists' attitudes towards social media usage in dentistry. Journal of medical Internet research 2018, 20(6):e10109.

URL: http://dx.doi.org/10.14738/bjhr.1203.18768.