

Original Research Article

Analysis of Instagram Posts About Orthognathic Surgery: A Methodological Study

Ortognatik Cerrahi ile İlgili Instagram Gönderilerinin Değerlendirilmesi: Metodoloji

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ABSTRACT

Aim: The use of social media has increased with the widespread use of the internet. Patients use social media for many reasons, such as to get information about their illness, get social support from other patients, and communicate with doctors. The purpose of this study is to analyze Instagram posts about orthognathic surgery.

Materials and Method: A new Instagram account has been opened so that the outcomes of the searches are not affected by bias. Three hashtags with the most posts about orthognathic surgery were determined. #orthognathicsurgery, #orthodonticsurgery, and #jawsurgery hashtags were classified on Instagram. The first hundred posts for each hashtag were analyzed. The sources of the posts were classified as healthcare professionals, individual users, and healthcare industries. The contents of the posts were categorized as patient experience and educational.

Results: In the posts about #orthognathicsurgery, a statistically significant difference was found between the number of likes according to the upload source. According to the upload source, there was no statistically significant difference between the number of comments and the number of likes on posts about #orthodonticsurgery and #jawsurgery.

Conclusion: Healthcare professionals should point out to patients that Instagram needs to be an adequate resource for patients in its current state.

The study results revealed that there needed to be more information about orthognathic surgery for patients on Instagram.

Keywords: Jaw surgery; Orthognathic surgery; Social media

ÖZET

Amaç: İnternet kullanımının yaygınlaşmasıyla birlikte ülkemizde sosyal medya kullanımı da artmıştır. Yapılan değerlendirmelerde hastaların sosyal medyayı hastalıkları hakkında bilgi almak, diğer hastalardan sosyal destek almak ve doktorlarla iletişim kurmak gibi pek çok amaçla kullandığı görülmüştür. Bu sebep ile ağız, diş ve çene cerrahisi alanında da hem hekim hem hasta açısından sosyal medya daha fazla önem kazanmaya başlamıştır. Bu çalışmanın amacı ortognatik cerrahi ile ilgili Instagram paylaşımlarını incelenmiştir.

Gereç ve Yöntem: Yapılan aramaların sonuçlarının önyargılardan etkilenmemesi için yeni bir Instagram hesabı açılmıştır. Ortognatik cerrahi ile ilgili en çok paylaşım yapılan üç hashtag belirlenmiştir. Instagram'da #orthognathicsurgery, #orthodonticsurgery, ve #jawsurgery hashtag'leri sınıflandırılmıştır. Her hashtag için ilk yüz gönderi analiz edilmiştir. Gönderilerin kaynakları sağlık uzmanları, bireysel kullanıcılar ve sağlık sektörleri olarak ayrılmıştır. Gönderilerin içerikleri hasta deneyimi ve eğitici olarak kategorize edilmiştir.

Bulgular: #ortognatikcerrahi için 12.154 gönderi, #ortodonticerrahi için 1453 gönderi ve #çenecerrahisi için 84.318 gönderi. #ortognatikcerrahi ile ilgili gönderilerde beğeni sayıları arasında istatistiksel olarak anlamlı bir fark bulunmuştur. #ortodonticerrahi ve #çenecerrahisi ile ilgili gönderilere yapılan yorum sayısı ve beğeni sayısı arasında yüklemeye kaynağına göre istatistiksel olarak anlamlı bir fark bulunmamıştır.

Sonuç: Sağlık profesyonelleri, Instagram'ın hastalar için yeterli bir kaynak olması gerektiğini hastalarına belirtmelidir. Çalışmanın sonuçları, Instagram'da hastalar için ortognatik cerrahi hakkında daha fazla bilgi olmasının gerektiğini ortaya koymuştur.

Anahtar Kelime: Çene cerrahisi; Ortognatik cerrahi; Sosyal medya

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INTRODUCTION

The use of social media has increased with the widespread use of the internet. Patients use social media for many reasons, such as to get information about their illnesses, get social support from other patients, and communicate with doctors.^{1,2} In dentistry, patients research their problems online and get information about the procedures.³

Although malocclusions can be corrected with conventional orthodontic treatments, orthognathic surgery may be required for skeletal deformities. Patients apply with the desire to improve their facial appearance.⁴ Patients receive information about this procedure from the surgeon who will perform the surgery and search for this surgery on social media.⁵ Uncertainties regarding the information patients acquire from social media remain unresolved.

Instagram (Instagram, Inc.) was founded in October 2010 as a social media platform where people can share videos, photos, and animations. It is one of the most popular social media platforms. According to the latest official statement, the population on Instagram is currently more than one billion monthly active users. 71% of individuals aged 18-29, 48% aged 30-49, 29% aged 50-64, and 13% of individuals over 65 years of age actively use Instagram.⁶

This study aims to analyze the quality and quantity of Instagram posts about orthognathic surgery and their possible effects on patients.

MATERIALS AND METHOD

A new Instagram account has been opened so that the outcomes of the searches are not affected by bias. Three hashtags with the most posts about orthognathic surgery were determined. An investigation was made by typing #orthognathicsurgery, #orthodonticsurgery, and #jawsurgery in the search button and found⁶ 154 posts for #orthognathicsurgery, 1.453 for #orthodonticsurgery, and 84.318 posts for #jawsurgery. The top 100 posts for each hashtag were chosen and reviewed. Posts that are open to all users and English posts are included in the study. After an intermittent number of posts, search quality on social media decreases.

62 posts out of 100 posts are excluded from the #orthognathicsurgery hashtag. Reasons for exclusion

were advertisement (8), other treatments (7), duplicate posts (4), non-English posts (30), and irrelevant posts (13). 72 posts out of 100 posts are excluded from the #orthodonticsurgery hashtag. Reasons for exclusion were advertisement (34), other treatments (21), duplicate posts (4), non-English posts (6), and irrelevant posts (7).

60 posts out of 100 posts are excluded from the #jawsurgery hashtag. Reasons for exclusion were advertisement (16), other treatments (13), duplicate posts (2), non-English posts (15), and irrelevant posts (14). The number of likes and comments on the posts was recorded. Upload sources were classified as healthcare professionals (maxillofacial surgeons, orthodontists, dentists), healthcare industries, and individual users. Post types were classified as patients' experience and education.

Statistical analyses

SigmaPlot 14 software (Systat Software Inc, San José, CA, USA) was used for statistical analysis. Shapiro–Wilk test was performed to see if the data were distributed normally. Kruskal–Wallis test was used for nonparametric data. The Bonferroni (Dunn) method was used after the Kruskal–Wallis test to find the differences between the groups. The significance level was accepted as $p < 0.05$.

RESULTS

A total of 97.925 posts were shared for these three hashtags on Instagram. Table 1 shows the number of likes, comments, and descriptive information.

According to the upload source, the posts included under the hashtag #orthognathicsurgery are individual users ($n=7$, 18.42%), healthcare professionals ($n=28$, 73.68%), and health companies ($n=3$, 7.9%). The posts included under the hashtag #orthodonticsurgery are individual users ($n=10$, 35.71%), health care professionals ($n=10$, 35.71%), and health companies ($n=8$, 28.57%). The posts included under the hashtag #jawsurgery are individual users ($n=23$, 57.50%), professionals ($n=13$, 32.50%), and health companies ($n=4$, 10.0%).

In the posts about #orthognathicsurgery, a statistically significant difference was found between the number of likes ($p < 0.001$) according to the upload source (Table 2). When these three groups were compared,

a statistically significant difference was found between health companies and patients (p=0.016). A statistically significant difference was found between healthcare professionals and patients (p<0.001). There was no statistically significant difference between health companies and healthcare professionals (p= 0.945).

No statistically significant difference was found among post comments on #orthognaticsurgery according to the upload source (p=0.199).

In the posts about #orthodonticsurgery, there was no statistically significant difference in the number of

likes according to the upload source (p=0.190).

No statistically significant difference was found among the number of comments on the #orthodonticsurgery posts according to the upload source (p= 0.272).

In the posts about #jawsurgery, there was no statistically significant difference in the number of likes according to the upload source (p= p0.171).

There was no statistically significant difference among the number of comments on posts about #jawsurgery according to the upload source (p= 0.269).

Table 1. Number of likes, comments, and descriptive information about #orthognaticsurgery, #orthodonticsurgery, and #jawsurgery

		#orthognaticsurgery	#orthodonticsurgery	#jawsurgery
Post type	Photograph	33	23	36
	Video	5	5	4
Number of likes	0-50	14	18	21
	51-100	5	6	4
	>100	19	4	15
Number of comments	0-5	24	20	24
	6-10	3	4	8
	>10	11	4	8
Source	Health care professionals	28	10	23
	Individual users	7	10	13
	Health companies	3	8	4
Purpose	Educational	31	18	17
	Patient's experience	7	10	40

Table 2. Comparison of likes and comments according to upload source

	#orthognaticsurgery		#orthodonticsurgery		#jawsurgery	
	Like	Comment	Like	Comment	Like	Comment
	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)
Healthcare professionals	132 (19-5357)	5(0-228)	30(5-1588)	8(0-101)	60(6-747)	2(0-12)
Individual users	7(4-28)	0(0-5)	50(2-73)	2(0-11)	37(4-975)	4(0-64)
Healthcare industries	128 (64-2372)	33(0-115)	5(1-660)	0(0-16)	5(4-329)	1(0-10)
P	p<0.001	p=0.199	p=0.190	p=0.272	p=0.171	p=0.269

Kruskal-Wallis

DISCUSSION

With the expansion of internet use, social media usage has also increased, and patients have started to investigate their health-related problems through these channels.⁷

Instagram has more than 500 million daily active users worldwide and is one of the most famous social media apps today.⁴ If Instagram is used ethically and carefully, it can be an educational resource for patients. It can harm patients when malicious or uninformed people share false information.^{8,9}

The current literature review has shown that social media platforms are essential in learning general and dental health information.^{10,11}

In the literature review, the studies examining social media content related to dentistry are generally associated with evaluating YouTube videos.¹² Studies investigating the quality of Instagram posts in health are few.¹⁰⁻¹³ For this reason, the quality of Instagram posts about orthognathic surgery was evaluated in our study.

The most common reason patients apply for orthognathic surgery is to correct facial deformities that affect their psychology. Patients need to be well-informed before this type of surgery.¹¹ In some cases, patients may not be able to obtain the information they want from the surgeon, and they try to obtain this information from social media. Hegarty *et al.*¹³ have shown that data about orthognathic surgery on social media is not an appropriate source for patients. Güler¹⁴ determined that 86% of the Instagram posts about wisdom teeth are poor quality.

Another critical factor in using social media is hashtags. Hashtags on Instagram increase the post's visibility. Accordingly, hashtags that are not based on the subject are used in the posts. Dorfman *et al.*¹⁵ investigated which hashtags are used clearly in plastic surgery.

In this study, 34 out of 300 Instagram posts were unrelated, even if they contained #orthognathicsurgery, #orthodonticsurgery, or #jawsurgery hashtags. Additionally, Samani *et al.*¹⁶ reported that only two Instagram posts were unrelated to dentistry. This problem misleads patients seeking information.

In the posts about #orthognathicsurgery, it has been determined that internet users like the posts of health companies and professionals more. Consistent with our research, Ayrancı *et al.*¹⁷ reported that health professionals uploaded most genioplasty posts.¹⁷ Despite that, Curtis *et al.*¹⁸ stated that the oral and maxillofacial market is behind the curve in using social media.

In the posts about #jawsurgery, there was no statistically significant difference in the number of likes according to the upload source. This result is similar to the study of Buyuk *et al.*⁵ on Instagram.

There were some limitations in our study. Firstly, although the three most shared hashtags about orthognathic surgery were examined in our study, other search results could be obtained with other hashtags about orthognathic surgery. Secondly, Instagram is a living platform and may give different results simultaneously. Furthermore, a higher quantity of posts produced more reliable outcomes.

CONCLUSION

The research results showed that there needed to be more statistics about orthognathic surgery for patients on Instagram. For this reason, it should not be overlooked that the content is insufficient, even if there is much sharing. Healthcare professionals should point out to patients that Instagram needs to be an adequate resource for patients in its current state.

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