

Original Article

QUALITY AND RELIABILITY ASSESSMENT OF YOUTUBE VIDEOS ON ZIRCONIA CROWNS: A CROSS-SECTIONAL STUDY

Mehmet Doğac Boz ¹, Serhat Suha Türkaslan ², Zeynep Başağaoğlu Demirekin ^{1*}

¹ Süleyman Demirel University, Faculty of Dentistry, Department of Prosthodontics, Isparta, Türkiye

² Antalya Bilim University, Faculty of Dentistry, Department of Prosthodontics, Antalya, Türkiye



ABSTRACT

The increasing use of social media platforms has led patients to seek health-related information online. This study aimed to evaluate the quality and reliability of YouTube videos related to zirconia crowns.

A total of 20 videos were analyzed using the keyword “zirconia crowns” with the default “sort by relevance” filter. Video characteristics (views, likes, comments, duration) were recorded, and content quality was assessed using previously defined criteria. Statistical analysis was performed using one-way ANOVA ($p < 0.05$).

The mean number of views was $152,353 \pm 132,001$, and the mean viewing rate was $41,118 \pm 36,318$. Most videos were categorized as moderate or poor in quality. Videos with higher quality were predominantly uploaded by professionals, whereas non-professional sources were associated with lower information quality.

YouTube cannot be considered a fully reliable source of information for patients regarding zirconia crowns. Dental professionals should play a more active role in providing accurate, evidence-based content on social media platforms.

Keywords: YouTube, Social Media, Zirconia Crown, Patient Education, Health Information

INTRODUCTION

With the increasing use of the internet, individuals have increasingly turned to internet-based search engines and social media to obtain information. Because the internet provides access to a wide range of topics, these platforms have become attractive to patients seeking health-related information and are perceived as useful resources [AlGhamdi and Moussa \(2012\)](#). Increased internet use has facilitated easy access to existing online health information and has led to the emergence of healthcare users who are more likely to become informed through such access. This, in turn, contributes to individuals' understanding of medical and dental treatments [Thapa et al. \(2021\)](#).

In addition to face-to-face physician-patient interaction, patients' hesitation to ask questions in person, together with the convenience of immediate access to medical information online despite waiting times in clinics, encourages individuals to seek information on social media platforms [Gholami-Kordkheili et al. \(2013\)](#). More than 80% of internet search activity is related to obtaining medical information and support [Madathil et al. \(2015\)](#). Nevertheless, internet users may not always possess sufficient skills to assess the accuracy of information available on social media or to relate such information appropriately to their own health conditions [Korkmaz and Buyuk \(2020\)](#).

*Corresponding Author:

Email address: Mehmet Doğac Boz (dt.dogac@hotmail.com), Serhat Suha Türkaslan (suhaturkaslan@yahoo.com), Zeynep Başağaoğlu Demirekin (dtzeynepbasagaoglu@yahoo.com.tr)

Received: 05 March 2026; **Accepted:** 21 April 2026; **Published** 31 May 2026

DOI: [10.29121/granthaalayah.v14.i5.2026.6878](https://doi.org/10.29121/granthaalayah.v14.i5.2026.6878)

Page Number: 32-36

Journal Title: International Journal of Research -GRANTHAALAYAH

Journal Abbreviation: Int. J. Res. Granthaalayah

Online ISSN: 2350-0530, **Print ISSN:** 2394-3629

Publisher: Granthaalayah Publications and Printers, India

Conflict of Interests: The authors declare that they have no competing interests.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Authors' Contributions: Each author made an equal contribution to the conception and design of the study. All authors have reviewed and approved the final version of the manuscript for publication.

Transparency: The authors affirm that this manuscript presents an honest, accurate, and transparent account of the study. All essential aspects have been included, and any deviations from the original study plan have been clearly explained. The writing process strictly adhered to established ethical standards.

Copyright: © 2026 The Author(s). This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

With the license CC-BY, authors retain the copyright, allowing anyone to download, reuse, re-print, modify, distribute, and/or copy their contribution. The work must be properly attributed to its author.

The ready accessibility of websites capable of providing information to patients enables them to make more informed health-related decisions. YouTube is one of the most frequently visited websites by patients seeking access to medical information and is the second most popular website on the internet after Google [Bezner et al. \(2014\)](#). Founded in 2005 as a video-sharing platform, YouTube currently receives billions of video views, and users spend a considerable amount of time on the platform daily [Findik and Buyukcavus \(2020\)](#). On YouTube, patients and professionals can share experiences, symptoms, or treatments through videos accompanied by various tags. However, this also creates a serious risk of misinformation and misdirection [Madathil et al. \(2015\)](#).

Zirconium is a transition metal element with atomic number 40 and does not occur freely in nature but rather in compound form. The most common compound is zirconium dioxide [Piconi and Maccauro \(1999\)](#). Zirconium oxide crystals exist in three phases: cubic, tetragonal, and monoclinic [Burger and Willmann \(1993\)](#).

The first reported medical use of zircon materials dates back to the late 1960s [Helmer and Driskell \(1969\)](#). Zirconia later became widely used in the biomedical field, and zirconia crowns were introduced in the early 2000s as an alternative restorative material [Alzanbaqi et al. \(2022\)](#). Zirconia is a dental ceramic with high flexural strength and fracture toughness and has long been used as a framework material or in monolithic form [Stawarczyk et al. \(2017\)](#). With increasing esthetic expectations, the use of zirconia crowns has expanded. One of their main advantages is their favorable esthetic appearance in addition to durability [Walia et al. \(2014\)](#), [Planells del Pozo and Fuks \(2014\)](#). Moreover, due to their highly polished surfaces, zirconia crowns demonstrate lower bacterial retention compared with alternative materials [Taran and Kaya \(2018\)](#), [Abdulhadi et al. \(2017\)](#).

This study aimed to evaluate the content and reliability of YouTube videos related to zirconia crowns in the context of oral rehabilitation.

MATERIALS AND METHODS

This study was conducted using publicly available data and did not involve human subjects; therefore, ethical approval was not required.

The YouTube search was conducted on February 5, 2025, using the keyword “zirconia crowns.” The most frequently used related terms were identified as “zirconia crowns” and “zirconia teeth.” The search was performed using a clean browser and a newly created account to minimize personalization. Videos were screened from the most relevant results. According to Google Trends, “zirconia crowns” was the most commonly used search term for this topic.

Only the default YouTube search filter (“sort by relevance”) was applied. A new user profile was created, and browser history and cookies were cleared prior to the search. The search results were listed according to video relevance. Inclusion criteria for the videos were as follows: Turkish language; content related to zirconia crowns; and acceptable audio and video quality. Exclusion criteria were as follows: language other than Turkish; videos longer than 35 minutes; videos with poor audio and video quality; and videos showing procedures performed in a patient’s mouth without providing any information.

The first 50 videos were screened, and the first 20 videos meeting the inclusion criteria were included in the analysis.

The number of views, comments, likes, video duration, source, and publication date were recorded. Based on these data, the viewing rate of each video was calculated [Figure 1](#).

Figure 1

$$\text{Viewing rate (\%)} = \frac{\text{View count}}{\text{Number of days since upload}} \times 100$$

Figure 1 Formula Used to Calculate the Viewing Rate.

The videos included were evaluated by a single researcher specializing in prosthodontics according to the information-quality assessment criteria defined by [Hegarty et al. \(2017\)](#). The videos were categorized into three groups based on information quality: poor, moderate, and good. Videos containing accurate, high-quality, and useful information for patients were classified as “good.” Videos that provided partially adequate information but had limitations in presentation quality were classified as “moderate.” Videos containing misleading information or providing no benefit to patients were classified as “poor” [Hegarty et al. \(2017\)](#).

To improve consistency, 20% of the videos were re-evaluated after a two-week interval by the same researcher.

STATISTICAL ANALYSIS

Statistical analysis was performed using SPSS version 26.0. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to evaluate the data. One-way analysis of variance (ANOVA) was conducted to assess differences among video categories. A p-value of < .05 was considered statistically significant.

RESULTS

Of the 20 videos, 12 were uploaded by dentists, 4 by clinics, 3 by patients, and 1 by a university [Figure 2](#). Among the analyzed videos titled “Zirconia crowns,” the minimum and maximum numbers of views were 5,773 and 554,654, respectively, with a mean of 152,353±132,001; the number of comments ranged from 3 to 945, with a mean of 251±248; video duration ranged from 0:27 to 30:23, with a mean of 6:30±7:40; and the number of likes ranged from 55 to 846, with a mean of 289.4±253.62. The mean viewing rate was 41,118±36,318 [Table 1](#).

The videos analyzed were further evaluated according to [Simsek et al. \(2020\)](#) and were compared by grouping them according to the information-quality categories used in the study by [Hegarty et al. \(2017\)](#) [Table 2](#).

Figure 2

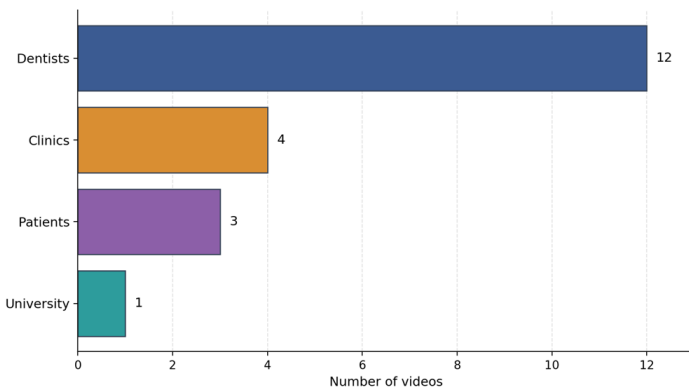


Figure 2 Sources of Uploaded Videos.

Table 1

Table 1 Video Characteristics.

Variable	Mean ± SD	Minimum	Maximum
Views	152,353 ± 132,001	5,773	554,654
Comments	251 ± 248	3	945
Duration	6:30 ± 7:40	0:27	30:23
Viewing rate	41,118.3 ± 36,318.5	1,724	122,618
Likes	289.4 ± 253.6	55	846

Table 2

Table 2 Comparison of YouTube Videos According to Content Quality.

Variable	Good	Moderate	Poor	p
Views	118,245 ± 66,479.2	108,033.6 ± 88,108.6	227,366.5 ± 181,715.9	0.178
Comments	254 ± 185.3	141.6 ± 129.5	375 ± 345.6	0.199
Duration	8:35 ± 05:01	06:38 ± 05:43	07:11 ± 11:04	0.662
Viewing rate	31,065.6 ± 21,794.2	48,727.2 ± 41,943.7	39,602.7 ± 40,542.4	0.711
Likes	317.2 ± 267.5	168.7 ± 113.7	407.5 ± 323.3	0.188

Note. Data were analyzed using one-way ANOVA. Statistical significance was set at p < .05.

DISCUSSION

In recent years, with the increasing popularity of the internet and social media, more individuals have incorporated online information into their decision-making processes. Studies have shown that 86% of individuals who use the internet to obtain health-related information consider such information reliable, and 64% report that it influences their medical decisions [DiMaggio et al. \(2001\)](#), [Morr et al. \(2010\)](#). Furthermore, [Baker et al. \(2010\)](#) reported that younger patients (<50 years) have significantly greater internet access and are more likely to use the internet to research their health conditions.

It is reasonable to assume that YouTube is among the primary platforms consulted by patients interested in zirconia crowns. Compared with other social media platforms, YouTube provides more influential visual content. Consequently, many patients, even after receiving information from dentists, turn to YouTube either for initial or supplementary information.

However, the reliability of information on YouTube remains questionable, as video content is not standardized and can be uploaded easily. It has been reported that 33% of individuals consider the most popular health-related information sources to be reliable [Nason et al. \(2013\)](#). At the same time, the presence of non-evidence-based information and the ability of non-professionals to upload content raise significant concerns. Previous studies have shown that a substantial proportion of health-related videos originate from amateur sources [Hegarty et al. \(2017\)](#), [Zincir et al. \(2019\)](#).

In the present study, YouTube users demonstrated considerable interest in zirconia crown-related videos. Both professionals and non-professionals contributed a large number of videos, many of which had high view counts. Users frequently interacted with videos by sharing their experiences and opinions in the comments.

It was observed that videos with high-quality information were predominantly uploaded by professionals, whereas those with moderate or poor information quality were more commonly uploaded by non-professionals. Additionally, most videos were found to have low or moderate information quality, which is consistent with previous studies evaluating YouTube content on health-related topics.

Interestingly, the longest videos were categorized as having poor information quality. This may be attributed to the inclusion of non-relevant personal content in videos uploaded by non-professionals. Moreover, the most-viewed videos were also frequently found in the poor-quality category. These findings are consistent with those reported by [Simsek et al. \(2020\)](#).

These results suggest that YouTube relevance algorithms do not necessarily reflect the actual quality of video content. The evaluation conducted by a prosthodontics specialist revealed that a significant proportion of videos contained misleading or insufficient information. Such content may negatively influence patient behavior by increasing the risk of misinformation. Furthermore, when online information conflicts with the scientific information provided by clinicians, it may reduce patients' trust or lead to skepticism regarding recommended treatments.

On the other hand, due to the dynamic nature of YouTube, search results and recommended videos may change over time. Users' preferences and viewing behaviors, along with algorithmic modifications, directly influence content visibility. Therefore, the reliability and continuity of information on YouTube should be interpreted with caution.

Furthermore, the findings of this study have important clinical implications. Patients who rely on inaccurate or misleading information from online platforms may develop unrealistic expectations regarding zirconia crown treatments. This may negatively affect the dentist-patient relationship, treatment acceptance, and overall clinical outcomes. Therefore, improving the quality of online educational content is not only essential for information accuracy but also critical for maintaining patient trust, improving treatment acceptance, and ensuring effective clinical outcomes in modern dental practice.

CONCLUSION

YouTube cannot be considered a reliable source of information for patients regarding zirconia crown restorations. Reliable information is still primarily provided by dental professionals. Therefore, more dentists and/or clinics should upload videos to YouTube presenting their views and informative details about zirconia crown restorations. Dental professionals should take a more active role in producing evidence-based educational video content to improve the quality of information available to patients on social media platforms. Future studies with larger sample sizes and multiple evaluators are recommended to enhance the generalizability of the findings.

ACKNOWLEDGMENTS

None.

REFERENCES

[Abdulhadi, B., Abdullah, M., Alaki, S., Alamoudi, N., and Attar, M. \(2017\). Clinical Evaluation Between Zirconia Crowns and Stainless Steel Crowns in Primary Molars Teeth. *Journal of Pediatric Dentistry*, 5\(1\), 21–21. \[https://doi.org/10.4103/jpd.jpd_21_17\]\(https://doi.org/10.4103/jpd.jpd_21_17\)](#)

- AlGhamdi, K. M., and Moussa, N. A. (2012). Internet Use by the Public to Search for Health-Related Information. *International Journal of Medical Informatics*, 81(6), 363–373. <https://doi.org/10.1016/j.ijmedinf.2011.12.004>
- Alzanbaqi, S. D., Alogaiel, R. M., Alasmari, M. A., Al Essa, A. M., Khogeer, L. N., Alanazi, B. S., et al. (2022). Zirconia Crowns for Primary Teeth: A Systematic Review and Meta-Analyses. *International Journal of Environmental Research and Public Health*, 19(5), 2838. <https://doi.org/10.3390/ijerph19052838>
- Baker, J. F., Devitt, B. M., Kiely, P. D., Green, J., Mulhall, K. J., Synnott, K. A., and Poynton, A. R. (2010). Prevalence of Internet Use Amongst an Elective Spinal Surgery Outpatient Population. *European Spine Journal*, 19(10), 1776–1779. <https://doi.org/10.1007/s00586-010-1377-y>
- Bezner, S. K., Hodgman, E. I., Diesen, D. L., Clayton, J. T., Minkes, R. K., Langer, J. C., and Chen, L. E. (2014). Pediatric Surgery on YouTube: Is the Truth Out There? *Journal of Pediatric Surgery*, 49(4), 586–589. <https://doi.org/10.1016/j.jpedsurg.2013.08.004>
- Burger, W., and Willmann, G. (1993). Advantages and Risks of Zirconia Ceramics in Biomedical Applications. *Bioceramics*, 6, 299–304.
- DiMaggio, P., Hargittai, E., Neuman, W. R., and Robinson, J. P. (2001). Social Implications of the Internet. *Annual Review of Sociology*, 27(1), 307–336. <https://doi.org/10.1146/annurev.soc.27.1.307>
- Findik, Y., and Buyukcavus, M. H. (2020). Can Social Media Tools Be Used as a Reliable Source of Information About Surgery-First Approach. *APOS Trends in Orthodontics*, 10(4), 224–230. https://doi.org/10.25259/APOS_111_2020
- Gholami-Kordkheili, F., Wild, V., and Strech, D. (2013). The Impact of Social Media on Medical Professionalism: A Systematic Qualitative Review of Challenges and Opportunities. *Journal of Medical Internet Research*, 15(8), e184. <https://doi.org/10.2196/jmir.2708>
- Hegarty, E., Campbell, C., Grammatopoulos, E., DiBiase, A. T., Sherriff, M., and Cobourne, M. T. (2017). YouTube as an Information Resource for Orthognathic Surgery. *Journal of Orthodontics*, 44(2), 90–96. <https://doi.org/10.1080/14653125.2017.1319010>
- Helmer, J. D., and Driskell, T. D. (1969). Research on Bioceramics: Symposium on Use of Ceramics as Surgical Implants. Clemson University.
- Korkmaz, Y. N., and Buyuk, S. K. (2020). YouTube as a Patient-Information Source for Cleft Lip and Palate. *The Cleft Palate-Craniofacial Journal*, 57(3), 327–332. <https://doi.org/10.1177/1055665619866349>
- MN, A. (2006). Microtensile Bond Strength of Different Components of Core Veneered All-Ceramic Restorations. Part II: Zirconia Veneering Ceramics. *Dental Materials*, 22, 857–863. <https://doi.org/10.1016/j.dental.2005.11.014>
- Madathil, K. C., Rivera-Rodriguez, A. J., Greenstein, J. S., and Gramopadhye, A. K. (2015). Healthcare Information on YouTube: A Systematic Review. *Health Informatics Journal*, 21(3), 173–194. <https://doi.org/10.1177/1460458213512220>
- Morr, S., Shanti, N., Carrer, A., Kubeck, J., and Gerling, M. C. (2010). Quality of Information Concerning Cervical Disc Herniation on the Internet. *The Spine Journal*, 10(4), 350–354. <https://doi.org/10.1016/j.spinee.2010.02.009>
- Nason, G. J., Tareen, F., and Quinn, F. (2013). Hydrocele on the Web: An Evaluation of Internet-Based Information. *Scandinavian Journal of Urology*, 47(2), 152–157. <https://doi.org/10.3109/00365599.2012.719540>
- Piconi, C., and Maccauro, G. (1999). Zirconia as a Ceramic Biomaterial. *Biomaterials*, 20(1), 1–25. <https://doi.org/10.1016/S0142-9612%2898%2900010-6>
- Planells del Pozo, P., and Fuks, A. B. (2014). Zirconia Crowns—An Esthetic and Resistant Restorative Alternative for ECC Affected Primary Teeth. *Journal of Clinical Pediatric Dentistry*, 38(3), 193–195. <https://doi.org/10.17796/jcpd.38.3.0255q84jt2851311>
- Simsek, H., Buyuk, S. K., Cetinkaya, E., Tural, M., and Koseoglu, M. S. (2020). “How I Whiten My Teeth”: YouTube as a Patient Information Resource for Teeth Whitening. *BMC Oral Health*, 20(1), 183. <https://doi.org/10.1186/s12903-020-01172-w>
- Stawarczyk, B., Keul, C., Eichberger, M., Figge, D., Edelhoff, D., and Lümke, N. (2017). Three Generations of Zirconia: From Veneered to Monolithic. Part I. *Quintessence International*, 48(5).
- Taran, P. K., and Kaya, M. S. (2018). A Comparison of Periodontal Health in Primary Molars Restored with Prefabricated Stainless Steel and Zirconia Crowns. *Pediatric Dentistry*, 40(5), 334–339.
- Thapa, D. K., Visentin, D. C., Kornhaber, R., West, S., and Cleary, M. (2021). The Influence of Online Health Information on Health Decisions: A Systematic Review. *Patient Education and Counseling*, 104(4), 770–784. <https://doi.org/10.1016/j.pec.2020.11.016>
- Walia, T., Salami, A. A., Bashiri, R., Hamoodi, O. M., and Rashid, F. (2014). A Randomised Controlled Trial of Three Aesthetic Full-Coronal Restorations in Primary Maxillary Teeth. *European Journal of Paediatric Dentistry*, 15(2), 113–118.
- Zincir, Ö. Ö., Bozkurt, A. P., and Gaş, S. (2019). Potential Patient Education of YouTube Videos Related to Wisdom Tooth Surgical Removal. *Journal of Craniofacial Surgery*, 30(5), e481–e484. <https://doi.org/10.1097/SCS.00000000000005573>