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Crown Lengthening Videos on YouTube, TikTok, and Vimeo: A Comparative Study

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Abstract

Objective: Online video platforms are increasingly used as sources of dental information; however, the information provided about crown lengthening may vary across platforms. This study evaluated crown lengthening videos available on YouTube, TikTok, and Vimeo.

Methods: Publicly available videos were systematically screened on YouTube, TikTok, and Vimeo. A total of 267 videos (134 YouTube, 19 TikTok, and 114 Vimeo) were included. Crown lengthening-specific information coverage was assessed using the 10-item Crown Lengthening Clinical Content Checklist (CL-CCC), information reliability using modified DISCERN, and overall quality using the Global Quality Score (GQS). Platform differences, uploader and presentation characteristics, correlations, and interrater reliability were analyzed.

Results: The median CL-CCC score was 4 (IQR, 2-6) and did not differ significantly across platforms (p=0.091). Preoperative periodontal/anatomical assessment was more frequently addressed on YouTube (adjusted p=0.024). Modified DISCERN and GQS differed significantly across platforms (both p=0.009). Videos with professional verbal explanations had higher CL-CCC, modified DISCERN, and GQS scores, whereas videos containing surgical procedure footage had lower scores. Video duration was positively correlated with CL-CCC (ρ=0.590), modified DISCERN (ρ=0.544), and GQS (ρ=0.665), while view count was not significantly associated with these scores. Interrater reliability was high. After adjustment for video duration, the overall platform effect remained significant for CL-CCC (p=0.019), but not for modified DISCERN (p=0.180) or GQS (p=0.506).

Conclusions: Crown lengthening videos across YouTube, TikTok, and Vimeo frequently underrepresented key information related to biological rationale, treatment planning, healing, and risks. Video popularity did not reflect more comprehensive or higher-quality information.

Categories: Medical Education, Public Health, Dentistry
Keywords: crown lengthening, social media platforms, surgical videos, tiktok, vimeo, youtube™

Introduction

Crown lengthening is one of the most commonly performed periodontal surgical procedures for increasing clinical crown height [1]. The procedure is designed to increase the amount of supragingival tooth structure for restorative and/or esthetic indications [2]. For restorative purposes, crown lengthening aims to provide adequate tooth structure for placement of the restorative margin in cases of insufficient tooth structure, subgingival caries, fractures, or endodontic perforations, whereas esthetic procedures are performed to correct excessive gingival display [3]. Ideally positioned restorative margins minimize tissue inflammation associated with pathologic probing depths and loss of periodontal supporting tissues [4]. A fundamental principle of the procedure is preservation of the dentogingival unit, also referred to as the supracrestal tissue attachment or biologic width. This structure consists of approximately 0.97 mm of epithelial attachment and 1.07 mm of connective tissue attachment [5]. Because violation of this dimension may result in chronic inflammation, bone loss, or undesirable gingival rebound, the amount of available keratinized tissue, bone level, and position of the future restorative margin should be considered together during surgical planning [2]. Crown lengthening may affect not only the surgically treated sites but also adjacent sites because of volumetric changes in the soft and hard tissues during healing [6]. Achieving predictable outcomes after crown lengthening surgery depends on several factors, including periodontal phenotype, healing time, and the clinician's surgical skills [7].

Patients and healthcare professionals increasingly use online video platforms to access dental information. Platforms such as YouTube and TikTok have become widely used sources of information because of their accessibility and audiovisual nature [8,9]. However, the scientific accuracy, clinical coverage, and reliability of the content available on these platforms may vary considerably. Previous studies in periodontology and other dental fields have reported that videos addressing gingival enlargement, gingival recession, labial frenectomy, storage media for avulsed teeth, and various surgical procedures generally provide low-to-moderate-quality information, frequently omit critical clinical information, and show inconsistencies

between popularity and scientific accuracy [8,10-12]. In the context of crown lengthening, however, studies systematically evaluating the clinical information coverage of online videos remain limited. General quality and reliability measures, such as the Global Quality Score (GQS) [13] and modified DISCERN [14,15], have been used to evaluate online health information, whereas the assessment of procedure-specific clinical content coverage remains less well established. This makes it difficult to determine the clinical comprehensiveness of the information encountered by viewers.

The primary aim of this study was to evaluate the clinical information coverage of publicly available videos related to crown lengthening on YouTube, TikTok, and Vimeo using the study-specific Crown Lengthening Clinical Content Checklist (CL-CCC). The secondary aims were to assess the reliability of the information using modified DISCERN and the overall quality of the videos using the GQS, and to investigate differences among the platforms.

Materials And Methods

Study design and ethics

This cross-sectional observational digital content analysis was conducted at the Department of Periodontology, Faculty of Dentistry, Adıyaman University. The clinical information coverage, reliability, and overall quality of publicly available video content related to crown lengthening on YouTube™, TikTok™, and Vimeo™ were evaluated. The primary outcome was clinical information coverage, assessed using the study-specific CL-CCC. Information reliability was assessed using modified DISCERN [14,15], while overall quality and educational usefulness were evaluated using the GQS [13].

Only publicly available online content and associated publicly accessible data were used. No data were collected from research participants, and no human or animal subjects were involved. Therefore, ethics committee approval was not required.

Search strategy and video selection

To determine a standardized search term for use across the platforms, the relative search interest of English-language terms related to crown lengthening was evaluated using Google Trends. “Crown lengthening” showed the highest relative search interest among the terms evaluated and was therefore selected as the standardized search term. Based on sampling approaches used in previous online video studies, the first 150 algorithmically ranked results on each platform were planned for screening; when 150 unique results were not available, all accessible results up to the natural end of the search were evaluated [8,10,11,16,17]. Accordingly, equal final sample sizes across platforms were not required, as the sampling strategy was based on the available search results within each platform rather than on a fixed number of eligible videos per platform.

Searches of YouTube, TikTok, and Vimeo were performed on September 10, 2026, using the term “crown lengthening.” To minimize the influence of personalized search results, searches were conducted while logged out of user accounts and, where possible, in private/incognito browser sessions. All searches were conducted from Türkiye using a local IP address without a virtual private network (VPN). The default “All” view was used on YouTube, the default result ranking on TikTok, and the “Videos” category with “Relevance” sorting on Vimeo; no additional popularity-based sorting was applied. Because search results may change over time, all platform searches were completed on the same day, and the results were recorded to preserve the initial search lists. The initial screening frame comprised 350 platform records: the first 150 unique results from YouTube, all 50 accessible results up to the natural end of the TikTok search, and the first 150 unique results from Vimeo. YouTube Shorts were included in the screening frame.

Eligibility criteria

Videos were included if they were publicly available, accessible at the time of assessment, and directly related to crown lengthening. Content was considered relevant if it meaningfully addressed at least one aspect of crown lengthening, including its definition, indications, preoperative assessment, surgical procedure, healing, risks, or clinical outcomes. The requirement of at least one relevant aspect was intentionally used as a broad eligibility threshold to avoid excluding crown lengthening-related videos solely because of limited clinical information coverage. The comprehensiveness of the included content was subsequently evaluated using the 10-item CL-CCC rather than being used as an inclusion criterion. Videos containing spoken narration or persistent on-screen text were required to present this content in English. Silent or music-only videos were included when their clinical content could be clearly evaluated without reliance on language-based information. No duration-based exclusion criterion was applied, and YouTube Shorts were eligible for assessment if they met the inclusion criteria.

Within-platform duplicate or reuploaded content, irrelevant videos, content that did not meet the language criterion, unavailable or removed videos, and paid search advertisements were excluded. For duplicate content within the same platform, the first occurrence in the search ranking was retained. Identical content published across different platforms was retained in the primary analysis as separate platform-specific observations. The video selection process and distribution of excluded records are presented in Figure *1*. The

final sample comprised 267 videos: 134 from YouTube, 19 from TikTok, and 114 from Vimeo.

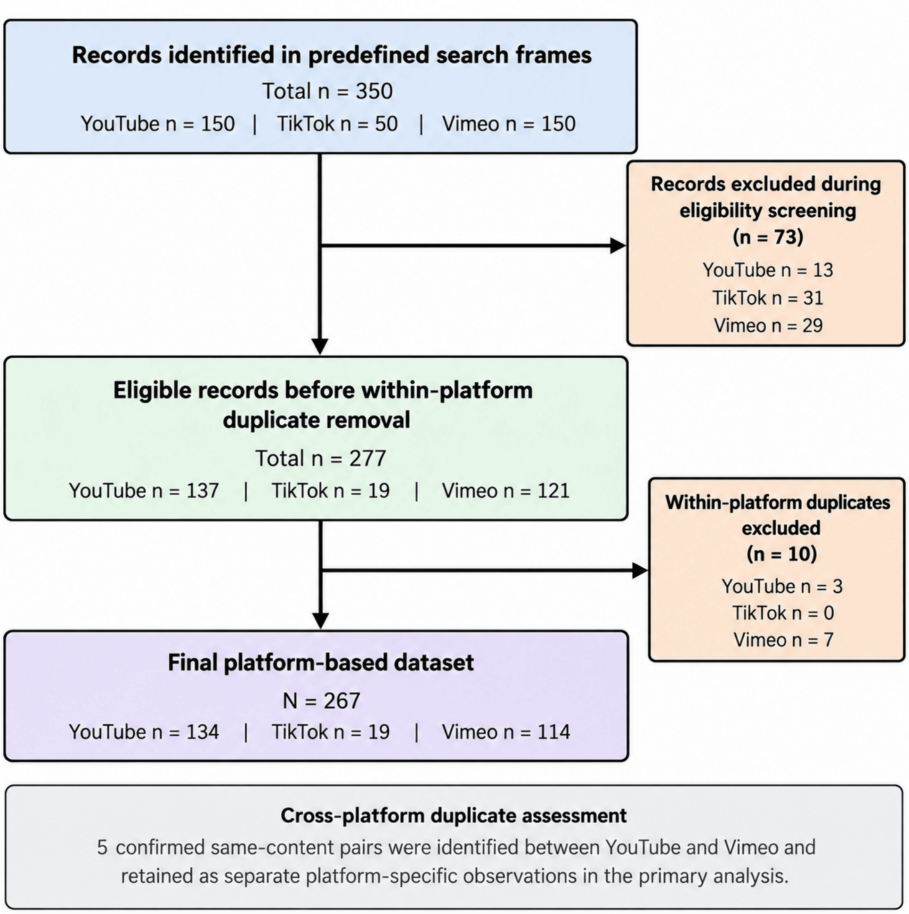


FIGURE 1: Flow diagram of video identification, eligibility assessment, duplicate removal, and final inclusion across YouTube, TikTok, and Vimeo

Video characteristics and data recording

For each video, the platform, search rank, video title, direct URL, duration, upload date, uploader source, and, when publicly available, the numbers of views, likes, and comments were recorded. Video duration was standardized in seconds, and video age was calculated as the interval between the upload date and the fixed metadata collection date. Engagement metrics that were not publicly available or could not be reliably verified were recorded as missing data, and only available observations were included in the corresponding analyses. Uploader sources were classified as periodontist, other dental healthcare professional, dental clinic/hospital/university, commercial company/organization, patient/other layperson, or other/unclear. Uploader classification was based on account/channel information and publicly available institutional or professional information. Video presentation characteristics were recorded as separate, non-mutually exclusive variables: professional verbal explanation, model demonstration, animation/illustration, clinical patient footage, and surgical procedure footage.

Assessment of video quality, reliability, and content

Videos included in the final sample were evaluated using a standardized a priori coding protocol. Crown lengthening-specific clinical information coverage was assessed using the study-specific CL-CCC, information reliability using modified DISCERN [14,15], and overall quality and educational usefulness using the GQS [13].

A study-specific 10-item CL-CCC was developed to assess the coverage of clinical information specific to crown lengthening. The items were established before the main video assessment based on consensus documents, systematic reviews, and current clinical literature [2,3,18-22]. Each item was scored as 0 (criterion not met) or 1 (criterion met), yielding a total score ranging from 0 to 10, with higher scores indicating more comprehensive clinical information coverage. The five-item modified DISCERN instrument

was used to assess information reliability. Each item was scored as 0 (no) or 1 (yes), yielding a total score ranging from 0 to 5 [14,15]. The five-point GQS was used to assess overall video quality, flow, and usefulness, with higher scores indicating better overall quality and usefulness [13]. The complete criteria and scoring structures for the CL-CCC, modified DISCERN, and GQS are provided in the Appendices.

The preliminary CL-CCC items were independently evaluated for content relevance by three periodontists using a four-point relevance scale ranging from 1 (not relevant) to 4 (highly relevant). Ratings of 3 or 4 were considered content-relevant for calculation of the item-level Content Validity Index (I-CVI). I-CVI values were 0.67 for items 4 and 6 and 1.00 for all other items, resulting in a scale-level Content Validity Index based on the average method (S-CVI/Ave) of 0.93 [20,21]. Based on expert feedback, item 4 was revised to explicitly include radiographic assessment, while item 6 was revised to explicitly include osteotomy and/or osteoplasty. Scoring was based solely on spoken narration, persistent on-screen text, and explicit clinical or visual demonstrations relevant to each criterion; clinical indications or rationales were not inferred from visual findings alone.

Statistical analysis and interrater reliability

Statistical analyses were performed using R software (version 4.6.1; R Foundation for Statistical Computing, Vienna, Austria). Continuous and ordinal variables were summarized as medians and interquartile ranges (IQRs), whereas categorical variables were summarized as numbers and percentages. Continuous/ordinal variables and total scores were compared across platforms using the Kruskal-Wallis test, followed by Dunn's post-hoc test for significant results. The Mann-Whitney U test was used for variables with sufficient data available from only two platforms. Effect sizes for Kruskal-Wallis analyses were reported as epsilon-squared (ε^2). Categorical variables were compared using Pearson's chi-square test; when expected cell frequencies were <5, a Monte Carlo chi-square test with 100,000 replications was used, with Cramér's V reported as the effect-size measure. Score comparisons according to presentation characteristics were performed using the Mann-Whitney U test, with rank-biserial correlation reported as the effect-size measure. Associations between variables were assessed using Spearman's rank correlation coefficient (ρ). To account for differences in video duration across platforms, additional multivariable linear regression models were fitted separately for CL-CCC, modified DISCERN, and GQS total scores, with platform and log-transformed video duration [ln(duration in seconds + 1)] as predictors. Heteroskedasticity-consistent (HC3) standard errors were used to calculate 95% confidence intervals and assess regression coefficients, and the overall platform effect was evaluated using a two-degree-of-freedom robust Wald test. Pairwise platform comparisons were adjusted using the Holm method. A sensitivity analysis was performed after excluding videos longer than 600 seconds. Missing engagement data were not treated as zero, and analyses were performed using available observations. Where appropriate, p-values were adjusted for multiple comparisons using the Holm method, and two-sided $p<0.05$ was considered statistically significant. A platform-representative subsample comprising approximately 20% of the final sample was independently evaluated by a second periodontist using the same coding protocol. Interrater reliability for the binary CL-CCC and modified DISCERN items was assessed using Cohen's κ and percentage agreement. Total scores were evaluated using a two-way random-effects, absolute-agreement, single-measure intraclass correlation coefficient [ICC(A,1)], whereas the ordinal GQS was assessed using quadratically weighted Cohen's κ. Reliability coefficients were reported with 95% confidence intervals (CIs).

Results

The final sample comprised 267 videos (YouTube, n=134; Vimeo, n=114; TikTok, n=19). Video duration differed significantly across platforms (Kruskal-Wallis $H=25.54$, $p<0.001$, $\varepsilon^2=0.089$). The median duration was 27 seconds (IQR: 20.5-54.5) on TikTok, 62.5 seconds (IQR: 34.75-130) on YouTube, and 97.5 seconds (IQR: 47-462.5) on Vimeo. Holm-adjusted Dunn's post-hoc tests showed significant differences for all three pairwise comparisons (TikTok-Vimeo, TikTok-YouTube, and Vimeo-YouTube; all adjusted $p\leq0.003$).

Video age also differed significantly across platforms (Kruskal-Wallis $H=17.82$, $p<0.001$, $\varepsilon^2=0.060$). TikTok videos were significantly more recent than both Vimeo and YouTube videos (adjusted $p<0.001$ for both comparisons), whereas no significant difference in video age was observed between Vimeo and YouTube (adjusted $p=0.806$). View counts differed markedly across platforms (Kruskal-Wallis $H=71.81$, $p<0.001$), with TikTok videos having the highest median number of views (9,487) and Vimeo videos the lowest (16). Like counts could only be compared between TikTok and YouTube and were significantly higher on TikTok (Wilcoxon rank-sum $W=1477.5$, $p=0.004$). Comment counts did not differ significantly between the platforms (Wilcoxon rank-sum $W=541$, $p=0.821$). Like and comment data were largely unavailable for Vimeo (Table *1*).

Characteristic	Overall, Median (IQR)	TikTok, Median (IQR)	Vimeo, Median (IQR)	YouTube, Median (IQR)	Valid n (%), overall	Valid n (%), TikTok	Valid n (%), Vimeo	Valid n (%), YouTube	Test statistic	p-values
Video duration, seconds	71 (39–163.5)	27 (20.5–54.5)	97.5 (47–462.5)	62.5 (34.75–130)	267 (100.0)	19 (100.0)	114 (100.0)	134 (100.0)	H=25.54	<0.001*
Video age, years	3.21(1.44–6.84)	0.84 (0.28–2.43)	3.41 (1.51–7.73)	3.16 (1.66–7.13)	267 (100.0)	19 (100.0)	114 (100.0)	134 (100.0)	H=17.82	<0.001*
Views	1,381.5 (153.5–9,444.25)	9,487 (3,360–20,250)	16 (6–35)	1,930 (522.25–11,523)	190 (71.2)	19 (100.0)	37 (32.5)	134 (100.0)	H=71.81	<0.001*
Likes	23 (7–109)	84 (27–201)	—	19 (4.25–70.25)	129 (48.3)	19 (100.0)	0 (0.0)	110 (82.1)	W=1477.5	0.004*
Comments	2.5 (1–10)	4 (1–16.5)	—	2 (1–9.5)	74 (27.7)	19 (100.0)	0 (0.0)	55 (41.0)	W = 541	0.821

TABLE 1: Video characteristics overall and by platform

Data are presented as median (IQR). Valid n indicates available observations for each variable. Three-platform comparisons were performed using the Kruskal–Wallis test; two-platform comparisons used the Wilcoxon rank-sum (Mann–Whitney U) test. Missing engagement data were not treated as zero. "—" indicates unavailable data. *Statistically significant ($p < 0.05$).

The distribution of uploader account categories differed significantly across platforms (χ^2=173.60, df=10, Monte Carlo p<0.001). On YouTube, the most common uploader sources were dental clinics/hospitals/universities, accounting for 59 (44.0%) videos, and other dental professionals, accounting for 41 (30.6%) videos. On Vimeo, commercial company/organization accounts accounted for 61 (53.5%) videos, followed by other/unclear sources with 33 (28.9%) videos. On TikTok, other dental professionals accounted for eight (42.1%) videos, followed by patients/other laypersons with 5 (26.3%) videos. Holm-adjusted pairwise comparisons showed significant differences between all three platform pairs (all adjusted p<0.001). Regarding presentation characteristics, animation/illustration (Pearson's $\chi^2 = 6.07$, df = 2, p = 0.048) and surgical procedure footage (Monte Carlo $\chi^2 = 6.00$, df = 2, p=0.047) differed significantly across platforms, whereas no significant differences were observed for professional verbal explanation, model demonstration, or clinical patient footage. For animation/illustration, only the TikTok-YouTube comparison remained significant after Holm adjustment (adjusted p=0.042). For surgical procedure footage, none of the pairwise comparisons remained significant after adjustment (Table *2*).

Characteristic	Overall n (%)	TikTok n (%)	Vimeo n (%)	YouTube n (%)	p-value	Test statistic	Cramér's V
Uploader account category							
Periodontist	13 (4.9)	0 (0.0)	0 (0.0)	13 (9.7)			
Other dental professionals	57 (21.3)	8 (42.1)	8 (7.0)	41 (30.6)			
Dental clinic/hospital/university	74 (27.7)	3 (15.8)	12 (10.5)	59 (44.0)			
Commercial/company	75 (28.1)	1 (5.3)	61 (53.5)	13 (9.7)			
Patient/layperson	7 (2.6)	5 (26.3)	0 (0.0)	2 (1.5)			
Other/unclear	41 (15.4)	2 (10.5)	33 (28.9)	6 (4.5)			
Overall uploader account association					<0.001*	$\chi^2 = 173.60$	0.57
Presentation characteristics							
Professional verbal explanation	119 (44.6)	5 (26.3)	46 (40.4)	68 (50.7)	0.065	$\chi^2 = 5.45$	0.143
Model-based demonstration	5 (1.9)	1 (5.3)	4 (3.5)	0 (0.0)	0.066	$\chi^2 = 5.41$	0.142
Animation/illustration	111 (41.6)	3 (15.8)	47 (41.2)	61 (45.5)	0.048*	$\chi^2 = 6.07$	0.151
Clinical patient footage	123 (46.1)	9 (47.4)	51 (44.7)	63 (47.0)	0.931	$\chi^2 = 0.14$	0.023
Surgical procedure footage	33 (12.4)	3 (15.8)	20 (17.5)	10 (7.5)	0.047*	$\chi^2 = 6.00$	0.15

TABLE 2: Uploader account category and presentation characteristics by platform

Data are presented as n (%). Uploader account category refers to the type of account/channel that uploaded the video, not the professional identity of individuals appearing in or narrating it. Platform comparisons were performed using Pearson's chi-square or Monte Carlo chi-square tests, as appropriate (df = 2 for presentation characteristics and df = 10 for uploader account category). Cramér's V is reported as the effect-size measure. *Statistically significant ($p < 0.05$).

The distribution of CL-CCC items across platforms showed that only preoperative periodontal/anatomical assessment (CL4) differed significantly after Holm adjustment ($\chi^2 = 12.04$, df = 2, Holm-adjusted p = 0.024). CL4 was present in 65 (48.5%) YouTube videos, 36 (31.6%) Vimeo videos, and three (15.8%) TikTok videos. Pairwise comparisons showed a significantly higher prevalence of CL4 on YouTube than on both TikTok (adjusted p=0.021) and Vimeo (adjusted p=0.021), whereas no significant difference was observed between TikTok and Vimeo (adjusted p=0.187). No statistically significant platform differences were observed for the other nine CL-CCC items; however, given the small TikTok sample (n=19), these null findings should be interpreted cautiously and should not be considered evidence of equivalence between platforms. The total CL-CCC score did not differ significantly across platforms (median: 4, IQR: 2-6, H=4.79, p=0.091, ε^2=0.011) (Table *3*).

CL-CCC item/score	Overall n (%)	TikTok n (%)	Vimeo n (%)	YouTube n (%)	p-value	Test statistic	Cramér's V
CL1 – Definition	147 (55.1)	7 (36.8)	64 (56.1)	76 (56.7)	1	$\chi^2 = 2.75$	0.102
CL2 – Restorative/functional indications	117 (43.8)	5 (26.3)	56 (49.1)	56 (41 .8)	0.858	$\chi^2 = 3.89$	0.121
CL3 – Esthetic indications	134 (50.2)	9 (47.4)	52 (45.6)	73 (54.5)	1	$\chi^2 = 2.00$	0.087
CL4 – Preoperative periodontal/anatomical assessment	104 (39.0)	3 (15.8)	36 (31.6)	65 (48.5)	0.024*	$\chi^2 = 12.04$	0.212
CL5 – Supracrestal tissue attachment/biologic rationale	64 (24.0)	3 (15.8)	33 (28.9)	28 (20.9)	1	$\chi^2 = 2.94$	0.105
CL6 – Approach/technique	191 (71.5)	10 (52.6)	90 (78.9)	91 (67.9)	0.211	$\chi^2 = 7.27$	0.165
CL7 – Need for osseous resection	70 (26.2)	4 (21.1)	35 (30.7)	31 (23.1)	1	$\chi^2 = 2.11$	0.089
CL8 – Healing/timing of definitive restoration	82 (30.7)	4 (21.1)	46 (40.4)	32 (23.9)	0.113	$\chi^2 = 8.75$	0.181
CL9 – Risks/limitations/postoperative consequences	80 (30.0)	4 (21.1)	34 (29.8)	42 (31.3)	1	$\chi^2 = 0.84$	0.056
CL10 – Expected outcomes/tissue stability	103 (38.6)	3 (15.8)	49 (43.0)	51 (38.1)	0.543	$\chi^2 = 5.11$	0.138
CL-CCC total score	4 (2–6)	2 (1–4)	4 (2–6)	4 (2–6)	0.091	H = 4.79	

TABLE 3: CL-CCC item prevalence and total score by platform

Data are presented as n (%) for individual items and median (IQR) for the total score. Item-level platform comparisons were performed using Pearson's chi-square or Monte Carlo chi-square tests, as appropriate (df = 2). p-values were Holm-adjusted across the 10 items. The total score was compared using the Kruskal-Wallis test. Significant item-level comparisons were followed by Holm-adjusted pairwise tests. *Statistically significant after Holm adjustment ($p < 0.05$).

CL-CCC: Crown Lengthening Clinical Content Checklist

Among the modified DISCERN items, only the use of reliable sources (MD2) differed significantly across platforms after Holm adjustment (adjusted p=0.006). MD2 was present in 30 (26.3%) of Vimeo videos and 15 (11.2%) of YouTube videos, whereas it was not observed in any TikTok videos 0 (0.0%). Pairwise comparisons showed a significantly higher prevalence of MD2 on Vimeo than on both TikTok (adjusted p=0.014) and YouTube (adjusted p=0.008), whereas no significant difference was observed between TikTok and YouTube. The total modified DISCERN score differed significantly across platforms (H=9.32, p=0.009). Holm-adjusted Dunn's post-hoc tests showed that TikTok had significantly lower scores than both Vimeo (adjusted p=0.007) and YouTube (adjusted p=0.028), whereas no significant difference was observed between Vimeo and YouTube. GQS also differed significantly across platforms (H=9.32, p=0.009). Only the TikTok-Vimeo comparison remained significant after adjustment (adjusted p=0.009), whereas the TikTok-YouTube and Vimeo-YouTube comparisons did not reach statistical significance (Table *4*).

Item/score	Overall n (%)	TikTok n (%)	Vimeo n (%)	YouTube n (%)	p-value	Test statistic	Cramér's V
MD1 – Clear aims and achievement of aims	239 (89.5)	15 (78.9)	104 (91.2)	120 (89.6)	0.366	$\chi^2 = 2.62$	0.099
MD2 – Reliable sources of information	45 (16.9)	0 (0.0)	30 (26.3)	15 (11.2)	0.006*	$\chi^2 = 14.20$	0.231
MD3 – Balanced and unbiased information	248 (92.9)	16 (84.2)	104 (91.2)	128 (95.5)	0.366	$\chi^2 = 4.05$	0.123
MD4 – Additional sources of information	15 (5.6)	0 (0.0)	3 (2.6)	12 (9.0)	0.253	$\chi^2 = 5.86$	0.148
MD5 – Areas of uncertainty	45 (16.9)	1 (5.3)	24 (21.1)	20 (14.9)	0.366	$\chi^2 = 3.61$	0.116
mDISCERN total score	2 (2–3)	2 (1–2)	2 (2–3)	2 (2–2)	0.009*	H = 9.32	
GQS	3 (2–4)	2 (2–3)	3 (2–4)	3 (2–4)	0.009*	H = 9.32	

TABLE 4: Modified DISCERN items, total score, and GQS by platform

Data are presented as n (%) for individual modified DISCERN items and median (IQR) for the modified DISCERN total score and GQS. Item-level platform comparisons were performed using Monte Carlo chi-square tests (df = 2), with Holm adjustment across the five items. The modified DISCERN total score and GQS were compared using the Kruskal-Wallis test (df = 2). Cramér's V is reported as the effect-size measure for item-level comparisons. *Statistically significant after Holm adjustment for item-level comparisons or at $p < 0.05$ for score-level comparisons.

GQS: Global Quality Score

When scores were examined according to uploader account category, the total CL-CCC score differed significantly across categories (H=15.44, p=0.009, ε^2=0.040). Patients/laypersons had the lowest median score (1, IQR 0.5-3), whereas median scores ranged from 2 to 4 across the other categories. However, none of the pairwise comparisons reached statistical significance in the Holm-adjusted Dunn's post-hoc tests. The total modified DISCERN score did not differ significantly across uploader categories (H=3.94, p=0.558). GQS differed significantly across uploader categories (H=17.78, p=0.003, ε^2=0.049). Post-hoc analyses showed significantly higher GQS scores for commercial company/organization accounts (adjusted p=0.005) and other dental professionals (adjusted p=0.036) compared with patients/laypersons. No other pairwise comparisons remained significant after adjustment (Table *5*).

Score	Uploader account category	n	Median (IQR)	Overall p-value	Test statistic	ε²
CL-CCC total	Periodontist	13	4 (1–4)	0.009*	H = 15.44	0.04
	Other dental professionals	57	4 (2–6)			
	Dental clinic/hospital/university	74	4 (2–6)			
	Commercial/company	75	4 (2–7)			
	Patient/layperson	7	1 (0.5–3)			
	Other/unclear	41	2 (1–4)			
mDISCERN total	Periodontist	13	2 (2–3)	0.558	H = 3.94	0
	Other dental professionals	57	2 (2–3)			
	Dental clinic/hospital/university	74	2 (2–2)			
	Commercial/company	75	2 (2–3)			
	Patient/layperson	7	2 (1.5–2)			
	Other/unclear	41	2 (2–3)			
GQS	Periodontist	13	3 (2–4)	0.003*	H = 17.78	0.049
	Other dental professionals	57	3 (2–4)			
	Dental clinic/hospital/university	74	3 (2–4)			
	Commercial/company	75	3 (3–4)			
	Patient/layperson	7	2 (1–2)			
	Other/unclear	41	3 (2–3)			

TABLE 5: CL-CCC, mDISCERN, and GQS scores by Uploader account category

Scores are presented as median (IQR). Comparisons across uploader account categories were performed using the Kruskal-Wallis test (df = 5). Epsilon-squared (ε²) is reported as the effect-size measure. *Statistically significant (p < 0.05).

GQS: Global Quality Score; CL-CCC: Crown Lengthening Clinical Content Checklist

When scores were examined according to presentation characteristics, videos containing professional verbal explanations had significantly higher CL-CCC (median: 5 vs 3), modified DISCERN (median: 2 vs 2), and GQS (median: 4 vs 3) scores than those without professional verbal explanations (all Holm-adjusted p<0.001; rank-biserial r=0.37-0.45). Videos containing animation/illustration had significantly higher GQS scores (adjusted p<0.001), whereas differences in CL-CCC and modified DISCERN scores were not significant after adjustment. Videos containing surgical procedure footage had significantly lower CL-CCC (median, 1 vs 4; adjusted p=0.006), modified DISCERN (adjusted p=0.002), and GQS (adjusted p=0.009) scores than those without such footage. No score differences according to model-based demonstration or clinical patient footage remained statistically significant after Holm adjustment (Table *6*).

Presentation characteristic	Score	Yes, n	Yes, Median (IQR)	No, n	No, Median (IQR)	Raw p	Holm-adjusted p	Rank-biserial correlation	Test statistic
Professional verbal explanation	CL-CCC total	119	5 (3–8)	148	3 (1–4)	<0.001	<0.001*	0.451	W = 4219.5
	mDISCERN total	119	2 (2–3)	148	2 (2–2)	<0.001	<0.001*	0.372	W = 5434
	GQS	119	4 (3–4)	148	3 (2–3)	<0.001	<0.001*	0.419	W = 4652
Model-based demonstration	CL-CCC total	5	9 (8–9)	262	4 (2–6)	0.009	0.062	0.161	W = 208.5
	mDISCERN total	5	3 (3–3)	262	2 (2–3)	0.019	0.095	0.144	W = 300
	GQS	5	5 (4–5)	262	3 (2–4)	0.009	0.062	0.16	W = 221.5
Animation/illustration	CL-CCC total	111	4 (2–6.5)	156	3 (1–5)	0.008	0.062	0.163	W = 7014
	mDISCERN total	111	2 (2–2.5)	156	2 (2–3)	0.218	0.873	0.075	W = 7980.5
	GQS	111	3 (3–4)	156	3 (2–4)	<0.001	<0.001*	0.252	W = 6178.5
Clinical patient footage	CL-CCC total	123	4 (1–7)	144	3.5 (2–5)	0.479	1	0.043	W = 8414
	mDISCERN total	123	2 (2–3)	144	2 (2–2)	0.82	1	0.014	W = 8729
	GQS	123	3 (2–4)	144	3 (2–4)	0.984	1	0.001	W = 8843.5
Surgical procedure footage	CL-CCC total	33	1 (1–4)	234	4 (2–6)	<0.001	0.006*	0.21	W = 5272.5
	mDISCERN total	33	2 (1–2)	234	2 (2–3)	<0.001	0.002*	0.23	W = 5241
	GQS	33	2 (1–4)	234	3 (2–4)	0.001	0.009*	0.201	W = 5178.5

TABLE 6: Quality and clinical-content scores according to presentation characteristics

Scores are presented as median (IQR). Comparisons between videos with and without each presentation characteristic were performed using the Wilcoxon rank-sum test. P values were Holm-adjusted across the 15 comparisons. Rank-biserial correlation is reported as the effect-size measure.
*Statistically significant after Holm adjustment ($p < 0.05$).

GQS: Global Quality Score; CL-CCC: Crown Lengthening Clinical Content Checklist

The total CL-CCC score showed significant positive correlations with both modified DISCERN (ρ=0.538, adjusted p<0.001) and GQS (ρ=0.854, adjusted p<0.001). Video duration was also positively correlated with CL-CCC (ρ=0.590), modified DISCERN (ρ=0.544), and GQS (ρ=0.665) scores (all adjusted p<0.001). In contrast, view count was not significantly associated with CL-CCC, modified DISCERN, or GQS scores. Video age was positively correlated with view count (ρ=0.362, adjusted p<0.001). Engagement metrics were strongly positively correlated with one another (views-likes, ρ=0.877; views-comments, ρ=0.588; likes-comments, ρ=0.748; all adjusted p<0.001) (Table 7).

Variable 1	Variable 2	n	Spearman's ρ	Holm-adjusted p
CL-CCC total	Modified DISCERN total	267	0.538	<0.001*
CL-CCC total	GQS	267	0.854	<0.001*
CL-CCC total	Video duration	267	0.59	<0.001*
Modified DISCERN total	GQS	267	0.639	<0.001*
Modified DISCERN total	Video duration	267	0.544	<0.001*
GQS	Video duration	267	0.665	<0.001*
Video age	Views	190	0.362	<0.001*
Views	Likes	129	0.877	<0.001*
Views	Comments	74	0.588	<0.001*
Likes	Comments	73	0.748	<0.001*

TABLE 7: Spearman correlations among clinical-content scores, quality scores, video duration, and selected engagement metrics

Spearman rank correlations were calculated for all 28 unique pairwise combinations of eight variables (CL-CCC, modified DISCERN, GQS, video duration, video age, views, likes, and comments). Holm adjustment was applied across all 28 tests, of which 10 selected correlations are presented in this table. Analyses were based on available paired observations; therefore, sample sizes varied according to data availability. Reported p-values are Holm-adjusted. *Statistically significant after Holm adjustment (p<0.05).

GQS: Global Quality Score; CL-CCC: Crown Lengthening Clinical Content Checklist

The results of the duration-adjusted multivariable regression analyses are presented in Table *8*. In duration-adjusted regression analyses, log-transformed video duration was positively associated with CL-CCC, modified DISCERN, and GQS scores (all p<0.001). The overall platform effect remained significant for CL-CCC (p=0.019), with higher adjusted scores for YouTube than Vimeo (β=0.724, 95% CI: 0.214-1.235; Holm-adjusted p=0.017) (Table *9*). In contrast, the overall platform effects were not statistically significant for modified DISCERN (p=0.180) or GQS (p=0.506). Sensitivity analyses excluding 37 videos longer than 600 seconds (remaining n=230; TikTok=19, Vimeo=87, and YouTube=124) yielded consistent findings, with a significant overall platform effect for CL-CCC (p=0.026), but not for modified DISCERN (p=0.572) or GQS (p=0.737).

Outcome/Predictor	β (95% CI) / Wald χ²	p-value
CL-CCC		
Vimeo vs TikTok	−0.613 (−1.446 to 0.221)	0.149
YouTube vs TikTok	0.112 (−0.681 to 0.904)	0.782
Log-transformed duration	1.324 (1.156 to 1.493)	<0.001
Overall platform effect	$\chi^2(2)=7.963$	0.019
Modified DISCERN		
Vimeo vs TikTok	0.030 (−0.299 to 0.359)	0.859
YouTube vs TikTok	0.182 (−0.137 to 0.500)	0.262
Log-transformed duration	0.365 (0.292 to 0.437)	<0.001
Overall platform effect	$\chi^2(2)=3.428$	0.18
GQS		
Vimeo vs TikTok	−0.053 (−0.408 to 0.302)	0.77
YouTube vs TikTok	0.071 (−0.269 to 0.412)	0.68
Log-transformed duration	0.503 (0.439 to 0.567)	<0.001
Overall platform effect	$\chi^2(2)=1.361$	0.506

TABLE 8: Multivariable regression results

n=267. TikTok is the reference category. β represents the unstandardized regression coefficient. Confidence intervals and coefficient p-values were calculated using HC3 heteroskedasticity-consistent standard errors. Overall platform effects were evaluated using robust Wald χ^2 tests. Duration was transformed as ln(seconds + 1). The coefficient p-values are not Holm-adjusted. Statistically significant results are indicated by p<0.05.

GQS: Global Quality Score; CL-CCC: Crown Lengthening Clinical Content Checklist

Comparison	CL-CCC p-value	Modified DISCERN p-value	GQS p-value
Vimeo vs TikTok	0.298	0.859	1
YouTube vs TikTok	0.782	0.524	1
YouTube vs Vimeo	0.017	0.281	0.744

TABLE 9: Pairwise platform comparisons (Holm-adjusted p-values)

Pairwise comparisons were based on the duration-adjusted regression models; p-values were adjusted using the Holm method separately for the three platform comparisons within each outcome. Statistically significant results are indicated by p<0.05.

GQS: Global Quality Score; CL-CCC: Crown Lengthening Clinical Content Checklist

Inter-rater reliability

Inter-rater reliability was assessed in a subsample of 54 videos. Agreement for individual CL-CCC items ranged from 88.9% to 98.1%, with Cohen's κ values ranging from 0.697 to 0.963. The CL-CCC total score demonstrated high inter-rater reliability (ICC[A,1] = 0.938, 95% CI: 0.888-0.965). For the modified DISCERN items, observed agreement ranged from 94.4% to 98.1%. The modified DISCERN total score also showed high inter-rater reliability (ICC[A,1] = 0.876, 95% CI: 0.795-0.926). For GQS, exact agreement was 92.6%, and quadratic-weighted Cohen's κ was 0.968 (95% CI: 0.932-0.993).

Discussion

In this study, the clinical information coverage, information reliability, and overall quality of publicly

available videos related to crown lengthening on YouTube, TikTok, and Vimeo were evaluated. The median total CL-CCC score was 4 (IQR, 2-6), indicating that crown lengthening-specific clinical information was addressed to a limited extent in a substantial proportion of the evaluated videos. In particular, critical clinical domains such as preoperative periodontal/anatomical assessment (CL4), supracrestal tissue attachment/biological rationale (CL5), indication for osseous resection (CL7), healing and timing of definitive restoration (CL8), and risks/limitations (CL9) were not comprehensively addressed in most videos. This finding is consistent with previous YouTube and TikTok studies in periodontology and other dental fields reporting low-to-moderate content quality and frequent omission of critical clinical information [8,10-12].

Studies evaluating online health-related videos have used different methodological approaches with respect to platform selection, search strategy, language, video duration, and sampling. Previous dental video analyses have employed single-platform designs as well as approaches comparing YouTube and TikTok or three different social media platforms [8,9,12,17,23,24]. In the present study, the inclusion of YouTube, TikTok, and Vimeo and the absence of a duration-based exclusion criterion were intended to represent the range of video formats that users may encounter when searching for "crown lengthening," including short-form content that met the eligibility criteria. The decision not to apply a minimum duration threshold is also supported by a previous dental video analysis that identified the lack of a standardized basis for such a threshold and the potential exclusion of short but informative videos as methodological limitations [11]. The dynamic and algorithm-dependent nature of online video platforms, whereby search results may vary over time and according to search conditions, has also been highlighted as an important methodological issue in previous research [10]. To reduce this variability, previous studies have used standardization strategies such as clean browser/session conditions, default rankings, searches conducted within a single session, and preservation of search-result lists after searching [9,10,25-27]. Similarly, in the present study, all searches were conducted on the same day and the initial result lists were recorded to standardize sampling conditions across platforms as much as possible. Within-platform duplicates were excluded to prevent overrepresentation of the same content on a single platform, whereas identical content appearing on different platforms was retained as separate observations to represent each platform-specific information environment. Regarding language, an English-language criterion was applied to videos containing spoken narration or persistent on-screen text, whereas silent or music-only videos were also included when their clinical content could be evaluated independently of language [28]. For content assessment, the CL-CCC, which measures procedure-specific clinical information coverage, modified DISCERN, which assesses information reliability, and the GQS, which evaluates overall video quality, were used together to examine distinct dimensions of information [13-15]. Similarly, previous dental video analyses have adopted multidimensional approaches combining topic-specific or guideline-based content checklists with general assessment instruments such as DISCERN and GQS [9,11,29]. In addition, the reliability of the assessment process was examined through independent second evaluation and interrater reliability analyses.

Although the total CL-CCC score did not differ significantly across platforms in the unadjusted analysis, this finding should be interpreted cautiously, particularly given the small TikTok sample, and should not be considered evidence of equivalence in clinical information coverage across platforms. However, the more frequent inclusion of preoperative periodontal/anatomical assessment in YouTube videos and the lower modified DISCERN scores of TikTok videos compared with both YouTube and Vimeo indicate that platform differences may vary according to the dimension of information being evaluated. Given the role of preoperative periodontal and anatomical assessment in determining the surgical approach and evaluating the need for osseous resection, less frequent presentation of this information may indicate that the clinical decision-making process is not adequately represented in online content. For GQS, only the difference between TikTok and Vimeo remained significant, further suggesting that platform-related differences were not consistent across all quality measures. Similarly, previous dental video studies have reported differences among platforms in information quality, reliability, and educational characteristics, with the magnitude and direction of these differences varying according to the platforms and information dimensions evaluated [8,12,17]. Nevertheless, these findings should not be interpreted as indicating the overall superiority of one platform over another. The structural constraints on content duration inherent to short-form platforms may limit the detailed presentation of complex clinical information; moreover, assessment instruments such as DISCERN or GQS may partly favor longer and more comprehensive content [30,31]. In the additional duration-adjusted analyses, the overall platform differences in modified DISCERN and GQS scores were no longer statistically significant. However, the overall platform effect for CL-CCC remained significant, with higher adjusted scores on YouTube than Vimeo. This finding was also supported by the sensitivity analysis excluding videos longer than 600 seconds. These results indicate that video duration is an important consideration in platform comparisons, although differences in clinical information coverage may persist after accounting for duration. Therefore, differences among platforms may be more appropriately interpreted across distinct dimensions, including procedure-specific clinical coverage, information reliability, and overall educational quality, rather than through a single overall judgment of quality.

The literature-based development of the CL-CCC, its evaluation for content validity by an expert panel (S-CVI/Ave=0.93), and its assessment of procedure-specific clinical information domains distinct from those captured by GQS and modified DISCERN represent an important methodological contribution of this study. The item-level CL-CCC findings further showed that several critical clinical domains, including biological rationale, indications for osseous resection, healing and restoration timing, and risks, were infrequently

addressed-information that would not be identifiable from global quality or reliability scores alone. Approach/technique (CL6) was the most frequently addressed CL-CCC domain, appearing in 191 (71.5%) videos. In contrast, supracrestal tissue attachment and biological rationale (CL5) were addressed in 64 (24.0%) videos, the need for osseous resection (CL7) in 70 (26.2%) videos, healing and timing of definitive restoration (CL8) in 82 (30.7%) videos, and risks and postoperative consequences (CL9) in 80 (30.0%) videos. This distribution suggests that videos placed greater emphasis on demonstrating how the procedure is performed than on explaining the clinical decision-making process and biological rationale. A similar pattern has been reported previously, with visual and procedural content receiving greater emphasis while important educational components such as patient selection, contraindications, complication risks, and long-term follow-up were frequently omitted [9]. The omission of safety-related information from patient-oriented online content has also been emphasized as potentially more clinically consequential than the omission of minor technical details [32,33]. This is particularly relevant to crown lengthening because treatment planning requires consideration of interrelated clinical factors, including supracrestal tissue relationships, bone level, restorative requirements, and periodontal tissue stability after healing [3,20]. Therefore, a visually comprehensible surgical demonstration does not necessarily indicate that indications, biological rationale, treatment planning, potential risks, and the healing process are adequately communicated. In this context, the combined use of the procedure-specific CL-CCC, modified DISCERN, and GQS is important, as previous studies have emphasized that multidimensional assessments may provide a more comprehensive evaluation than a single instrument because different assessment tools capture different dimensions of online health information [34-36]. Among the modified DISCERN items, only the use of reliable information sources (MD2) differed across platforms, and the overall low prevalence of this criterion suggests that source transparency may be limited in online videos.

The strong positive correlation between CL-CCC and GQS scores (ρ=0.854) raises concerns regarding potential construct overlap and discriminant validity. Although the CL-CCC assesses predefined crown lengthening-specific clinical information and the GQS evaluates overall quality and educational usefulness, greater clinical information coverage may contribute to higher GQS ratings. Therefore, some degree of redundancy cannot be excluded, and discriminant validity between the two instruments remains uncertain. Nevertheless, the item-level CL-CCC assessment provides procedure-specific information that cannot be obtained from the GQS alone.

Video duration was positively correlated with CL-CCC, modified DISCERN, and GQS scores, suggesting that longer videos may allow clinical information to be presented in greater detail. Similarly, previous dental and medical video analyses have reported positive associations between video duration and content coverage, reliability, and overall quality scores [10,11,29,37]. The positive associations between video duration and all three assessment scores also persisted in the multivariable regression analyses after accounting for platform. In contrast, the absence of significant associations between view count and CL-CCC, modified DISCERN, or GQS in the present study does not support the assumption that more frequently viewed content provides more comprehensive or higher-quality clinical information. This finding is also consistent with previous studies reporting no consistent relationship between views or other engagement metrics and content or quality scores [29,37]. Platform algorithms may contribute to this discrepancy because content visibility can be influenced by engagement signals, entertainment value, and user behavior rather than educational value alone [38,39]. Therefore, views and other engagement metrics should not be considered direct indicators of clinical information quality.

Although some score differences were observed according to uploader source, more pronounced differences were associated with presentation format. Patients/laypersons had the lowest CL-CCC and GQS scores, although pairwise comparisons for CL-CCC did not remain significant after adjustment. In contrast, videos containing professional verbal explanations had higher CL-CCC, modified DISCERN, and GQS scores, suggesting that structured professional narration may be important for the coverage and quality of online dental information. Similarly, previous dental video studies have reported that content published by professional or healthcare-related sources may achieve higher information and quality scores [16,29,37]. However, videos containing surgical procedure footage had lower scores across all three assessment measures, suggesting that visual demonstration of a procedure alone does not necessarily provide comprehensive and reliable educational content. This finding may indicate that content emphasizing surgical demonstration tends to prioritize technical execution, while clinical decision-making components such as indications, biological rationale, treatment planning, and potential risks may receive less attention.

The significant positive correlations of CL-CCC with modified DISCERN and GQS indicate that clinical information coverage, information reliability, and overall video quality are interrelated. Nevertheless, these instruments represent distinct dimensions of assessment. The CL-CCC reflects procedure-specific clinical information coverage, modified DISCERN assesses information reliability, and the GQS reflects overall quality and educational usefulness [13-15]. A systematic review examining instruments used to evaluate online surgical videos similarly emphasized that no single assessment tool captures all dimensions of video content and highlighted the importance of using complementary assessment instruments [40]. Consistent with this distinction, only GQS was higher in videos containing animation/illustration, suggesting that visual presentation features may enhance perceived overall quality and usefulness without necessarily improving procedure-specific clinical coverage or information reliability.

This study has several limitations. Owing to the dynamic and algorithm-dependent nature of online video platforms, the findings reflect a specific search date and set of search conditions; although standardized searches conducted on the same day and preservation of the initial result lists reduced this variability, they could not eliminate it entirely [10,27]. Differences in the availability of publicly accessible engagement data across platforms resulted in analyses of views, likes, and comments being based on different sample sizes and limited the direct comparability of these metrics [23]. In addition, the relatively small TikTok sample may have limited the statistical power and precision of platform-specific comparisons; similar imbalances in sample sizes across platforms have also been observed in previous dental video studies [8,17]. Although the additional regression analyses accounted for video duration, the cross-sectional design does not allow causal separation of platform-related characteristics from differences in video length. Furthermore, the use of linear regression for bounded assessment scores and the unequal distribution of video durations across platforms should be considered when interpreting the adjusted estimates. The inclusion of English-language content only limits the generalizability of the findings to content in other languages [27]. Although the three-expert panel used for content-validity assessment met the commonly cited minimum, the relatively small panel size may limit the generalizability of the I-CVI and S-CVI estimates. Although content validity and interrater reliability were established for the CL-CCC, its external validity has not yet been evaluated in independent samples. Finally, the use of a single primary evaluator for the main assessments does not completely exclude the possibility of evaluator-related effects. Blinding the primary evaluator to the video platform, uploader identity, and presentation style was not feasible given the nature of the audiovisual content. Therefore, potential expectation-related rating bias cannot be excluded, despite the assessment of inter-rater reliability.

Conclusions

In conclusion, online videos on crown lengthening placed greater emphasis on how the procedure is performed than on why and under which clinical conditions it should be performed. Across the evaluated platforms, key components of clinical decision-making, including biological rationale, treatment planning, healing, and risks, were frequently underrepresented, while video popularity was not associated with more comprehensive or higher-quality information. These findings suggest that the value of online dental content should be assessed not only by its visibility or visual presentation, but also by the extent to which it represents the clinical decision-making process.

Appendices

Section/item	Operational definition or coding rule
CL-CCC items	0 = absent/criterion not met; 1 = present/criterion met
Modified DISCERN items	0 = no; 1 = yes
GQS	One overall score ranging from 1 to 5
Total-score fields	Automatically calculated from the corresponding item-level scores; not entered manually

TABLE 10: Coding rules for assessment tools

CL-CCC items were coded as 0 (absent/criterion not met) or 1 (present/criterion met). Modified DISCERN items were coded as 0 (no) or 1 (yes). GQS was assigned as one overall score ranging from 1 to 5. Total CL-CCC and modified DISCERN scores were calculated automatically from the corresponding item-level scores and were not entered manually.

CL-CCC: Crown Lengthening Clinical Content Checklist; GQS: Global Quality Score.

Item	Criterion	Scoring
MD1	The aims of the video are clear and achieved	0 = No; 1 = Yes
MD2	Reliable sources of information are used	0 = No; 1 = Yes
MD3	The information is presented in a balanced and unbiased manner	0 = No; 1 = Yes
MD4	Additional sources of information are provided for viewers	0 = No; 1 = Yes
MD5	Areas of uncertainty, variability, or limitations are addressed	0 = No; 1 = Yes

TABLE 11: Modified DISCERN criteria

Total modified DISCERN score: 0–5.

Score	Criterion
1	Very poor quality; poor flow of information, most essential information is missing, and not useful to viewers
2	Generally poor quality; some information is provided, but important information is missing and usefulness is limited
3	Moderate quality; information is adequately presented, but some important information is missing
4	Good quality; overall flow of information is good, most important information is provided, and the video is useful to viewers
5	Excellent quality; information is presented clearly, comprehensively, and coherently, and the video is highly useful to viewers

TABLE 12: Global Quality Score (GQS)

Item	Content criterion	Scoring
CL1	Definition of crown lengthening	0 = Absent; 1 = Present
CL2	Restorative/functional indications	0 = Absent; 1 = Present
CL3	Esthetic indications	0 = Absent; 1 = Present
CL4	Preoperative periodontal/anatomical and relevant radiographic assessment	0 = Absent; 1 = Present
CL5	Supracrestal tissue attachment/biological rationale	0 = Absent; 1 = Present
CL6	Crown lengthening approach or technique, including osteotomy and/or osteoplasty	0 = Absent; 1 = Present
CL7	Indication or need for osseous resection	0 = Absent; 1 = Present
CL8	Healing process and timing of definitive restoration	0 = Absent; 1 = Present
CL9	Risks, limitations, or postoperative consequences	0 = Absent; 1 = Present
CL10	Expected clinical outcomes and tissue stability	0 = Absent; 1 = Present

TABLE 13: Crown Lengthening Clinical Content Checklist (CL-CCC)

Total CL-CCC score: 0–10.

Additional Information

Author Contributions

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

Concept and design: Ismail Tekbas

Acquisition, analysis, or interpretation of data: Ismail Tekbas

Drafting of the manuscript: Ismail Tekbas

Critical review of the manuscript for important intellectual content: Ismail Tekbas

Supervision: Ismail Tekbas

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