

Assessment of the quality and reliability of Turkish-language YouTube videos on cleft lip and palate: A cross-sectional study

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Abstract

Aim: Cleft lip and palate (CLP) are among the most prevalent congenital anomalies, necessitating long-term, multidisciplinary care. In recent years, patients and their families have increasingly turned to online platforms, such as YouTube, for health-related information. This study aimed to assess the quality and reliability of information in Turkish-language YouTube videos concerning CLP.

Methodology: A cross-sectional analysis of YouTube videos was conducted in August 2025. The platform was searched using the keywords "cleft lip" and "cleft palate," and the first 110 relevant videos were included for analysis. Videos were evaluated using a comprehensive scoring system based on ten criteria, including etiology, surgical and orthodontic treatment, feeding, and prognosis. Videos were also categorized by their source: individual health professionals, corporate health professionals, health websites, and independent users. Descriptive statistics and the Kruskal-Wallis test were used to analyze data.

Results: Of the 109 videos analyzed, the mean total information score was 5.3 ± 4.5 (out of a possible 24). The majority of videos (66.1%) were of poor quality (score 0-5). The most frequently covered topics were surgical treatment (66.1%) and prognosis (66.1%), while prenatal diagnosis (15.6%) and Nasoalveolar molding (NAM) (15.6%) were the least covered. Although videos from corporate health professionals had the highest mean score (8.0 ± 6.1), there was no statistically significant difference in the information quality across the different source categories ($p = 0.086$).

Conclusion: While YouTube contains a vast amount of information regarding cleft lip and palate, the overall quality is poor and highly variable. Healthcare professionals should be aware of the information their patients may be accessing and should consider taking an active role in creating and directing patients to high-quality, reliable online content.

Keywords: Cleft lip and palate, YouTube, dental anomaly, patient education, social media

Introduction

Congenital malformations are referred to as birth defects. Structural, morphological, metabolic, psychological, behavioral, and functional problems are all possible. Physical, mental, and even fatal problems can result from birth abnormalities. Among the detrimental consequences of these anomalies are reduced life expectancy, lower quality of life, and the imposition of excessive financial burdens on households (1).

Cleft lip and palate (CLP) represent the most common craniofacial birth defects and can manifest as a single abnormality or as a syndrome, with a global incidence of approximately 1 in 700 live births. Congenital cleft lip and/or cleft palate are two categories for orofacial clefts. In the most complicated cases, their etiology is influenced by a mix of inherited and environmental factors. External causes include biological variables, medications, pollution, hormone abnormalities, and malnutrition (2-6). These conditions present a significant challenge for affected individuals and their families, necessitating a complex multidisciplinary treatment approach that often extends from infancy into adulthood and involves specialties such as surgery, orthodontics, speech therapy, and psychology (7-10). Given the long and often arduous treatment journey, access to accurate and understandable information is crucial for parental decision-making and management of the condition (8).

In the digital age, the Internet has become a primary resource for health-related information (14-18). A significant portion of the population now turns to online sources to understand medical conditions, assess treatment options, and seek support (15). Platforms such as YouTube, a video-sharing website with over two billion monthly users, have emerged as particularly influential sources of health information because of their accessibility and the engaging nature of video content (18-20). However, the open and unregulated nature of this platform raises concerns about the quality, accuracy, and reliability of the information provided (14, 20).

Previous research has consistently highlighted the variable quality of medical information available on YouTube in various fields. Studies have shown that a substantial percentage of videos contain misleading or even harmful information, often presented by non-experts (14, 19). This issue is particularly pertinent for conditions such as CLP, where misinformation can lead to unrealistic expectations, anxiety, and poor treatment decisions (20-22).

While some studies have specifically investigated YouTube as an information source for CLP (12, 15), a comprehensive analysis using a detailed scoring system that covers the full spectrum of the patient journey remains necessary. Therefore, this study aimed to systematically evaluate the quality and reliability of information in Turkish-language YouTube videos related to cleft lip and palate. By analyzing the content and

source of these videos, we aimed to identify the strengths and weaknesses of the platform as an educational tool for this specific patient population and provide guidance for both healthcare providers and families navigating this complex condition.

Materials and Methods

This study analyzed publicly available YouTube data and did not involve human participants; therefore, ethical approval was not required.

A cross-sectional study was conducted in August 2025 to analyze the content of YouTube videos related to cleft lip and palate. The study was designed and reported in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines.

The YouTube platform was systematically searched using the keywords "cleft lip" and "cleft palate." The search was performed using a commonly used web browser with the cache, and the search history was cleared to ensure unbiased results. The first 110 videos from the search results for each keyword were initially screened for relevance. After removing duplicates and irrelevant content, a final cohort of 109 videos was included in the analysis.

Videos were included if they were in Turkish, and their primary subject was related to cleft lip and/or palate. Videos were excluded if they were duplicates, in a language other than Turkish, not relevant to the topic (e.g., music videos, news reports with only passing mentions), or were silent or contained only background music without any informational content.

All included videos were independently reviewed by two researchers. Data regarding video characteristics (duration, total views, and likes) and content were extracted and recorded in a spreadsheet. A comprehensive scoring system was developed to evaluate the informational quality of each video. This system was based on ten key informational categories relevant to the CLP treatment journey: Etiology, Classification, Prenatal Diagnosis, Orthodontic Treatment, Feeding, Naso-alveolar Moulding (NAM), Surgical Treatment, Prognosis, Speech Therapy, and Visual Content. Each category was scored on a scale from 0 (no information) to 3 (comprehensive information), with a maximum possible total score of 24. Videos were also categorized based on their primary source:

- (1) Individual health professionals,
- (2) Corporate health professionals (e.g., hospitals, universities),
- (3) Health websites,
- (4) Independent users (e.g., patients and families).

Statistical Analysis

Statistical analyses were performed using the SPSS software (Version 20.0; IBM Corp., Armonk, NY, USA).

Descriptive statistics, including the mean, standard deviation (SD), median, and interquartile range (IQR), were used to summarize video characteristics. Frequencies and percentages were used for categorical data. The Kruskal-Wallis test was used to compare total information scores across different source categories because the data were not normally distributed. A p-value of less than 0.05 was considered statistically significant.

Results

A total of 109 videos were included in the final analysis. The general characteristics of these videos are presented in Table 1. The mean duration of the videos was 274.2 s, and they had an average of 2860 views and 12.8 likes. The mean total information score for all videos was 5.3 ± 4.5 , with a median score of 4 (out of a maximum of 24), indicating a generally low level of informational content.

The analysis of specific content categories revealed that most videos provided information on only a limited

number of topics (Table 2). The most frequently addressed topics were surgical treatment (66.1% of videos) and prognosis (66.1% of videos). In contrast, crucial topics such as prenatal diagnosis (15.6%) and Nasoalveolar molding (NAM) (15.6%) were rarely addressed.

Videos were predominantly uploaded by health websites (45.9%), followed by individual health professionals (22.0%), and independent users (19.3%). Corporate health professionals accounted for the smallest proportion of the videos (11.0%). Although videos from corporate health professionals achieved the highest mean information score (8.0 ± 6.1), the Kruskal-Wallis test showed no statistically significant difference in total scores among the different source categories ($H = 6.593$, $p = 0.086$) (Table 3).

Based on the total scores, the videos were categorized into four quality levels: poor (0-5), fair (6-10), good (11-15), and excellent (>15). Most of the videos (66.1%) were classified as low quality. Only a small fraction of the videos were rated as good (6.4%) or excellent (4.6%).

The schematic representation of the study is graphically illustrated in Figure 1.

Table 1. Characteristics of the analyzed YouTube videos (N=109).

Variable	Mean $\pm$ SD	Median (IQR)	Range
Duration (seconds)	274.2 $\pm$ 530.1	107 (62-193)	22-3587
Views	2860 $\pm$ 5015	895 (216-3007)	21-34132
Likes	12.8 $\pm$ 19.4	6 (2-15)	0-110
Total score	5.3 $\pm$ 4.5	4 (2-7)	0-24

Table 2. Frequency of information content in YouTube videos

Content category	Videos with information n (%)
Etiology	29 (26.6)
Classification	32 (29.4)
Prenatal diagnosis	17 (15.6)
Orthodontic treatment	31 (28.4)
Feeding	35 (32.1)
Nam	17 (15.6)
Surgical treatment	72 (66.1)
Prognosis	72 (66.1)
Speech therapy	41 (37.6)
Visual content	24 (22.0)

Table 3. Comparison of total information score by video source

Source	n (%)	Mean score $\pm$ SD	Median (IQR)
Individual health professionals	24 (22.0)	5.8 $\pm$ 4.6	4 (3-7)
Corporate health professionals	12 (11.0)	8.0 $\pm$ 6.1	6 (4-11)
Health websites	50 (45.9)	4.2 $\pm$ 3.0	3 (2-5)
Independent users	21 (19.3)	5.9 $\pm$ 5.7	5 (2-7)

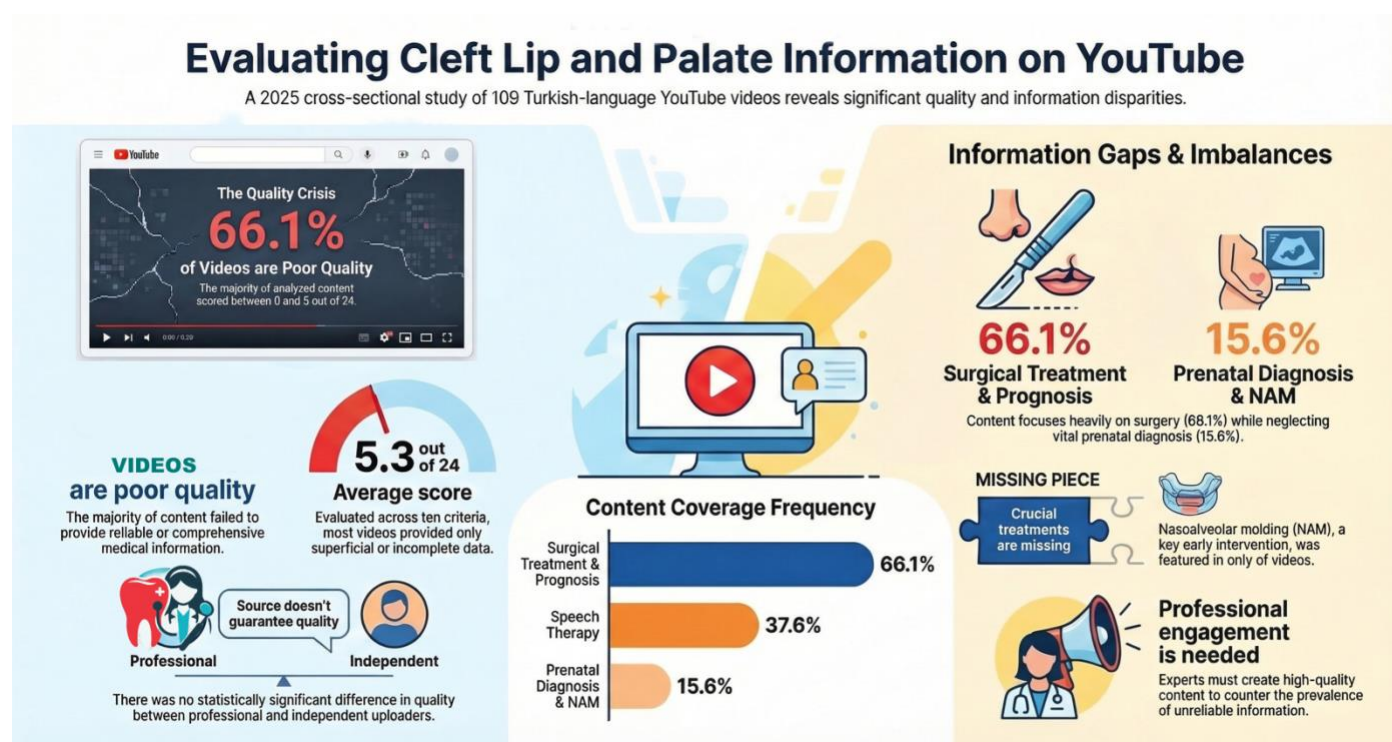


Figure 1. Schematic representation of the study.

Discussion

This study provides a comprehensive analysis of the quality and reliability of information on YouTube regarding cleft lip and palate. The principal finding was that while a large volume of content exists, the overall quality of information is low and inconsistent. The mean information score was only 5.3 out of a possible 24, and a striking 66.1% of the analyzed videos were classified as "poor". This aligns with the broader literature on health information on social media, which consistently raises concerns about accuracy and completeness (14, 16-18).

Our findings are comparable to those of previous studies evaluating health information on YouTube. For instance, Korkmaz and Büyük also found that the quality of information on CLP on YouTube was generally low (15). Our study expands on this by using a more detailed, multicriteria scoring system and analyzing the source of the information. The fact that crucial topics, such as prenatal diagnosis (11, 12) and NAM (13), were covered in only 15.6% of the videos is particularly concerning. These are areas in which timely and accurate information is vital for parents to make informed decisions and prepare for the care of their child. The high frequency of content related to surgical treatment and prognosis is expected, as these are often the most visually dramatic and emotionally charged aspects of the CLP journey, making them popular topics for video content.

One of the key aspects of our study was the analysis of the information quality based on the video source. Although not statistically significant, videos produced by corporate health professionals (hospitals and universities) had the highest average quality scores. This suggests that institutional resources and professional oversight may contribute to more comprehensive and reliable content creation. However, the lack of a statistically significant difference among the groups indicates that even content from professional sources can be of variable quality, and that high-quality content can also be found from independent users. This underscores the difficulty for the average user in discerning reliable information from unreliable information without clear indicators of quality (19).

Limitations

This study has several limitations. First, the search was limited to Turkish-language videos and specific keywords, which may not capture the full spectrum of the available content. Second, the cross-sectional design provides only a snapshot of a constantly changing digital environment. Third, although the scoring system was comprehensive, it inevitably involved a degree of subjectivity, which was mitigated by the use of two independent reviewers. Finally, this study measured the presence and quality of information, but not its impact on patient knowledge, attitudes, or behaviors.

Conclusion

YouTube serves as a significant, widely accessed source of information for individuals and families affected by cleft lip and palate. However, the content is highly variable and generally poor in quality. While the platform holds great potential as an educational tool, its current state is a landscape of unreliable information that could be confusing or misleading for patients. There is a clear and urgent need for the professional medical community to engage with this platform to improve the quality of the available information and better support patients and their families.

Disclosures

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Author Contributions: Conception – C.G.; Design – C.G.; Supervision – C.G.; Materials – I.E.L.; Data Collection and/or Processing – C.G., I.E.L.; Analysis and/or Interpretation – C.G., I.E.L.; Literature Review – C.G.; Writer – C.G.; Critical Review – C.G., I.E.L.

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