ORIGINAL ARTICLE

Analysis of the Quality and Reliability of Health Information on Thumb Carpometacarpal Joint Osteoarthritis on the YouTube Platform

YouTube Platformunda Başparmak Karpometakarpal Eklem Osteoartritine İlişkin Sağlık Bilgilerinin Kalite ve Güvenilirliğinin Analizi

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ABSTRACT

Aim: This study aimed to evaluate the reliability and quality of information in YouTube videos related to thumb carpometacarpal (CMC) osteoarthritis.

Methods: This cross-sectional study was conducted on June 1, 2025, by searching the keyword "thumb CMC osteoarthritis" on YouTube. A total of 60 videos were analyzed in terms of source, content, duration, and number of views. The reliability and quality of the videos were independently assessed by two physicians using the Modified DISCERN (mDISCERN), Global Quality Scale (GQS), and Journal of the American Medical Association (JAMA) benchmark criteria.

Results: Among the analyzed videos, 26.7% (n=16) were classified as low quality, 45.0% (n=27) as moderate quality, and 28.3% (n=17) as high quality. Videos uploaded by physicians achieved significantly higher mDISCERN, GQS, and JAMA scores compared to other uploader groups (p<0.001 for all). No significant correlation was observed between video quality and user engagement metrics such as the number of views, likes, or comments (p>0.05 for all).

Conclusions: A total of 71.7% of the evaluated YouTube videos were of low or moderate quality. Videos uploaded by healthcare professionals, particularly physicians, demonstrated higher reliability and content quality. These findings emphasize the importance of active involvement by healthcare professionals in digital content creation and highlight the need for initiatives aimed at improving digital health literacy.

Keywords: Carpometacarpal joints, health literacy, internet, osteoarthritis, youtube

ÖZ

Amaç: Bu çalışma, başparmak karpometakarpal (CMC) osteoartriti ile ilgili YouTube videolarındaki bilgi güvenilirliğini ve içerik kalitesini değerlendirmeyi amaçlamıştır.

Gereç ve Yöntemler: Kesitsel olarak tasarlanan bu çalışmada, 1 Haziran 2025 tarihinde YouTube'da "thumb carpometacarpal (CMC) osteoarthritis" anahtar kelimesiyle arama yapılmıştır. Toplam 60 video; kaynak, içerik, süre ve izlenme sayısı açısından analiz edilmiştir. Bilgi güvenilirliği ve içerik kalitesi, iki hekim tarafından Modified DISCERN (mDISCERN), Global Quality Scale (GQS) ve Journal of the American Medical Association (JAMA) kriterleri kullanılarak bağımsız olarak değerlendirilmiştir.

Bulgular: İncelenen videoların %26,7'si (n=16) düşük, %45,0'ı (n=27) orta ve %28,3'ü (n=17) yüksek kalitede bulunmuştur. Hekimler tarafından yüklenen videoların mDISCERN, GQS ve JAMA puanları, diğer gruplara kıyasla anlamlı derecede daha yüksek bulunmuştur (tümü için p<0,001). Video kalitesi ile izlenme sayısı, beğeni ve yorum gibi kullanıcı etkileşim ölçütleri arasında ise anlamlı bir ilişki saptanmamıştır (tümü için p>0,05).

Sonuçlar: İncelenen YouTube videolarının %71,7'si düşük veya orta kalitede bulunmuştur. Sağlık profesyonelleri, özellikle hekimler tarafından yüklenen videolar, daha yüksek güvenilirlik ve içerik kalitesi göstermektedir. Bu bulgular, dijital içerik üretiminde sağlık profesyonellerinin etkin katılımının gerekliliğini ve dijital sağlık okuryazarlığının artırılmasına yönelik girişimlerin önemini ortaya koymaktadır.

Anahtar Kelimeler: İnternet, karpometakarpal eklem, osteoartrit, sağlık okuryazarlığı, youtube

INTRODUCTION

Osteoarthritis is commonly seen in the thumb carpometacarpal (CMC) joint, which is one of the most frequently affected joints of the hand. Thumb CMC osteoarthritis is particularly prevalent in women over the age of 50 and is a progressive, degenerative joint disease characterized by symptoms such as thumb pain, reduced grip strength, thenar muscle atrophy, and deformity (1, 2). The symptomatic prevalence is approximately 7% in women and 2% in men (3). With the aging population, the incidence of thumb CMC osteoarthritis is expected to increase in the coming years (4). Most clinical guidelines recommend initiating treatment with conservative approaches, which may include orthotic (splint) use, exercise therapy, analgesics or anti-inflammatory medications, and corticosteroid injections, either as monotherapy or in combination. If symptoms cannot be adequately controlled with conservative methods, surgical options should be considered (5, 6). Current guidelines emphasize that treatment plans should be individualized based on symptom severity, functional expectations, and the patient's lifestyle (1).

In the digital age, individuals increasingly prefer visual and interactive formats that enable faster access to information. This shift has transformed YouTube from a simple video-sharing platform into a widely used search tool for health-related information (7, 8). However, systematic reviews indicate that the quality of such videos is generally average or below average (8). Furthermore, popularity indicators such as view counts and likes often show no significant correlation, or even an inverse relationship, with the scientific accuracy or educational value of the content (7, 9).

The growing use of YouTube as an information source for musculoskeletal disorders such as thumb CMC osteoarthritis highlights the need for a systematic evaluation of its content in terms of scientific accuracy, neutrality, and educational value. However, to date, there is no comprehensive study in the literature that specifically investigates the quality, reliability, and educational merit of YouTube videos related to thumb CMC osteoarthritis. Therefore, this study aims to assess the quality and reliability of YouTube videos related to thumb CMC osteoarthritis using validated tools, and to identify factors that influence video content quality.

MATERIALS and METHODS

Study Design and Data Collection

This cross-sectional study was designed to evaluate the content, quality, and reliability of YouTube videos related to thumb CMC joint osteoarthritis. The video search was conducted on June 1, 2025, using the keyword "thumb CMC osteoarthritis" on the YouTube platform. Prior to the search, browser history and cookies were cleared. Search results were sorted by view count, reflecting YouTube's ranking system, which prioritizes videos with higher engagement metrics. A total of 97 videos from the first three pages were initially listed. This cutoff was chosen based on previous research indicating that users typically review only the first few pages of results, as well as due to practical limitations regarding the feasibility of evaluating larger numbers of videos (10, 11). After applying the exclusion criteria, 37 videos were excluded, and 60 were included in the final analysis.

Specific inclusion and exclusion criteria were applied during the video selection process. Only English-language videos were included in the evaluation. The exclusion

criteria were as follows:

•Videos not related to thumb CMC osteoarthritis

•Videos in languages other than English

•Duplicate videos

•Videos with audio-visual issues that prevented accurate assessment

•Videos created solely for promotional purposes

In cases where the inclusion of a video was uncertain, both reviewers discussed the issue and reached a final decision by consensus.

Assessment of Reliability and Quality

All videos were assessed by two physicians (FÇA, GE) using the mDISCERN, GQS, and JAMA criteria. To minimize observer bias, each reviewer independently scored the videos, blinded to the other's evaluations. In addition, basic viewing metrics such as video duration, total number of views, average daily views, and number of likes were recorded. The source of each video was categorized as physicians, non-physician healthcare professionals, independent users, health-related websites, or social media platforms. Furthermore, the content of each video was systematically analysed to determine whether it addressed topics such as general information, exercise applications, surgical treatment options, kinesio taping techniques, or massage methods.

The mDISCERN is a five-item checklist developed to assess the reliability of the information presented in videos. The items evaluate whether the information is clearly presented, whether sources are cited, the objectivity of the content, whether alternative treatment options are discussed, and whether areas of uncertainty are addressed. Each item is scored as "yes" (1 point) or "no" (0 points). The total score ranges from 0 to 5, with higher scores indicating more reliable content (12).

GQS is a 5-point scale used to assess the overall quality of a video. It considers factors such as the comprehensiveness, accuracy, clarity of the information presented, and its practical value for the viewer. Videos are scored from 1 (very poor) to 5 (excellent). GQS scores are typically categorized as low quality (1–2), moderate quality (3), and high quality (4–5) (13).

JAMA criteria consist of four items: authorship, attribution, currency, and disclosure. Each item is scored on a scale of 0 to 1, resulting in a total score ranging from 0 to 4. These criteria are widely used to assess the structural reliability of online health information (14).

Ethical Statement

In this study, only publicly available YouTube videos were analysed. No direct interaction with human participants occurred, and no personal data were collected. Therefore, ethical approval was not required. Similarly, previous studies in the literature involving YouTube content analysis have also reported that ethical approval was not deemed necessary (11, 15, 16).

Data Analysis

The data obtained in this study were analysed using the Statistical Package for the Social Sciences (SPSS) version 25.0. Descriptive analyses were presented as frequency (n) and percentage (%) for categorical variables, and as median (minimum–maximum) or interquartile

range (1st quartile–3rd quartile, IQR) for numerical variables. The normality of distribution for numerical data was assessed using the Kolmogorov–Smirnov and Shapiro–Wilk tests. The Kruskal–Wallis test was used to compare nonparametric data across more than two independent groups. For statistically significant Kruskal–Wallis results, post hoc analysis was performed using the Mann–Whitney U test with Dunn–Bonferroni correction. The Fisher–Freeman–Halton test was used for comparing categorical variables. Results were evaluated at a 95% confidence interval, with a significance level set at p<0.05.

RESULTS

A total of 97 videos related to thumb CMC joint osteoarthritis were initially screened on YouTube, and 60 videos that met the inclusion criteria were included in the study. Figure 1 illustrates the flowchart of the video selection process, including the number of videos excluded and the reasons for exclusion.
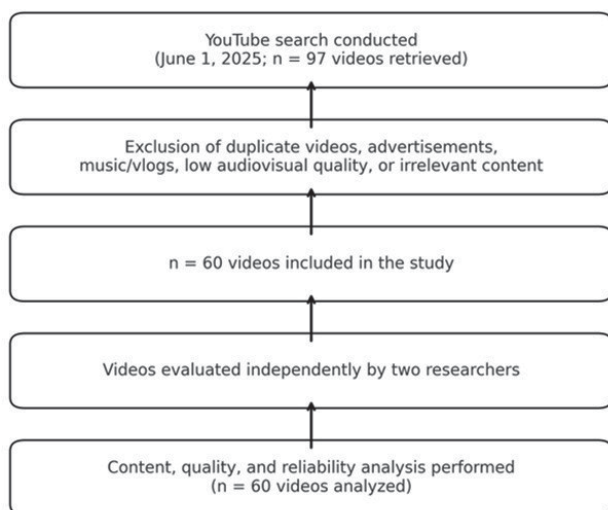

Figure 1. Flowchart of YouTube video selection process for thumb CMC joint osteoarthritis analysis

The distribution of video content and sources is presented in Table 1. Among the videos analyzed, 33.3% (n=20) focused on informational content, 18.3% (n=11) addressed injection techniques, and 16.7% (n=10) were related to surgical techniques. Regarding video uploaders, 40.0% (n=24) were non-physician healthcare professionals such as physiotherapists, while 38.3% (n=23) were physicians.

Table 1. Distribution of video content categories and sources for thumb CMC osteoarthritis

|	Number of Videos (n=60) n (%)
Video Content	
Informational content	20 (33,3)
Injection techniques	11 (18,3)
Surgical techniques	10 (16,7)
Exercise	7 (11,7)
Kinesio taping	6 (10,0)
Orthoses	4 (6,7)
Massage	2 (3,3)
Video Source	
Non-physician healthcare professionals	24 (40,0)
Physicians	23 (38,3)
Independent users	7 (11,7)
Health-related websites and social media platforms	6 (10,0)

The general characteristics of the evaluated videos on thumb CMC joint osteoarthritis are presented in Table 2. The median video duration was 3.78 minutes, and the median number of views was 32,347. A high level of inter-rater agreement was observed between the two independent reviewers for the GQS, mDISCERN, and JAMA scoring systems. Cohen's kappa (κ) coefficients were calculated as 0.84 for GQS, 0.79 for mDISCERN, and 0.81 for JAMA (p < 0.001).

Table 2. General characteristics of analyzed videos related to thumb CMC osteoarthritis

	Number of Videos (n=60) Median (min-max) / (IQR)
Video duration (minutes)	3,78 (0,24-38,00) / (1,69-6,45)
Number of views	32347,00 (4109,00-1300000,00) / (9019,25-98907,75)
Daily views	24,64 (1,38-1088,78) / (8,94-61,38)
Number of likes	327,50 (7,00-21000,00) / (88,25-760,25)
Number of comments	20,00 (0,00-1175,00) / (3,00-49,50)
Year of upload	2021,00 (2008,00-2024,00) / (2019,00-2022,00)
Time since upload (days)	1336,50 (466,00-6058,00) / (1028,00-2231,75)
mDISCERN score	3,00 (1,00-5,00) / (2,00-3,00)
GQS score	3,00 (1,00-5,00) / (2,00-4,00)
JAMA score	2,00 (1,00-4,00) / (2,00-3,00)

mDISCERN: Modified DISCERN, JAMA: Journal of the American Medical Association benchmark criteria, GQS: Global Quality Scale, IQR: Interquartile range (25th–75th percentile)

The highest number of videos related to this topic were uploaded to the platform in 2021 (n=12) and 2022 (n=12). Figure 2 presents the distribution of uploaded videos by year.
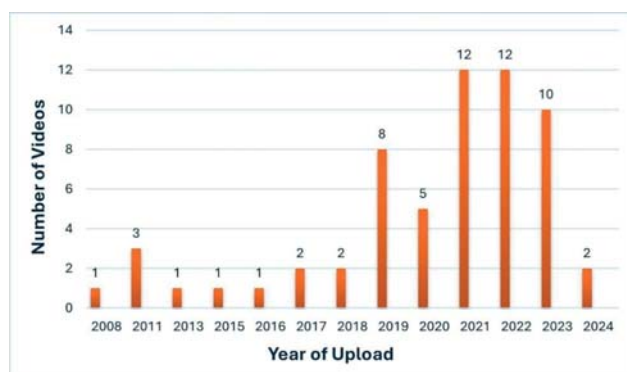
Figure 2. Distribution of YouTube videos on thumb CMC osteoarthritis by year of upload

The distribution of video characteristics by source is presented in Table 3. While general metrics such as video duration, views, likes, comments, and time since upload did not differ significantly between uploader groups (p > 0.05), mDISCERN, GQS, and JAMA scores showed significant differences (all p < 0.001). Post hoc analysis indicated that physicians' videos scored significantly higher than those of all other uploader groups, and videos by non-physician healthcare professionals scored higher than those of independent users. Quality classification also differed significantly (p < 0.001), with all videos by independent users rated as low quality, whereas 69.6% of physician-uploaded videos were rated as high quality.

According to the quality classification, 45.0% (n=27) of the videos were of moderate quality, 28.3% (n=17) were of high quality, and 26.7% (n=16) were of low quality. Figure 3 presents the distribution of video quality categories.
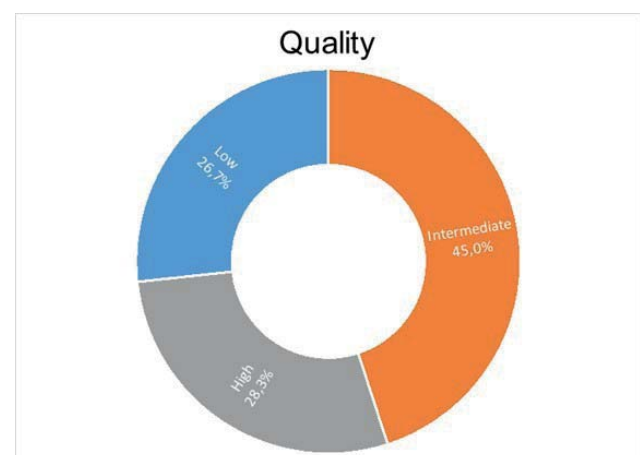

Figure 3. Distribution of video quality levels for thumb CMC osteoarthritis videos

Table 3. Distribution of video characteristics, quality, and reliability scores by source for thumb CMC osteoarthritis videos

	Physicians (n=23)[1]	Non-physician Healthcare Professionals (n=24)[2]	Independent Users (n=7)[3]	Health-Related Websites and Social Media Platforms (n=6)[4]	P[1-2-3-4]	posthoc
Video duration (min)	5,39 (2,29-8,21)	4,22 (2,40-6,90)	1,30 (0,49-3,10)	2,00 (1,44-4,07)	**0,053***	
Number of views	31074,00 (8802,00-78253,00)	37201,50 (11410,25-134938,75)	100914,00 (6581,00-324224,00)	25776,00 (14171,25-83475,00)	**0,700***	
Daily views	18,79 (6,61-40,62)	36,93 (9,95-65,81)	110,94 (2,93-134,25)	20,43 (2,76-35,69)	**0,404***	
Number of likes	206,00 (65,00-496,00)	525,00 (140,50-2275,00)	695,00 (48,00-5300,00)	183,00 (27,75-335,25)	**0,073***	
Number of comments	14,00 (3,00-35,00)	37,00 (7,25-95,25)	45,00 (2,00-103,00)	4,00 (2,25-17,75)	**0,100***	
Time since upload (days)	1331,00 (1098,00-2213,00)	1305,00 (918,50-1879,75)	2028,00 (798,00-2457,00)	2847,00 (908,00-4160,50)	**0,341***	
mDISCERN score	4,00 (3,00-4,00)	3,00 (2,00-3,00)	1,00 (1,00-2,00)	2,00 (2,00-3,00)	**<0,001***	**p[1-2]: 0.001, p[1-3]:0.001, p[1-4]:0.024**
GQS score	4,00 (3,00-4,00)	3,00 (3,00-3,00)	2,00 (1,00-2,00)	2,50 (2,00-3,00)	**<0,001***	**p[1-2]: 0.001, p[1-3]:0.001, p[1-4]:0.018, p[2-3]:0.001**
JAMA score	2,00 (2,00-3,00)	3,00 (2,00-3,00)	1,00 (1,00-1,00)	1,00 (1,00-2,00)	**<0,001***	**p[1-3]:0.001, p[1-4]:0.006, p[2-3]:0.001, p[2-4]:0.012**
Quality						**p[1-2]: 0.001, p[1-3]:0.001, p[1-4]:0.012, p[2-3]:0.001**
Low	2 (8,7)	4 (16,7)	7 (100,0)	3 (50,0)	**<0,001****	
Moderate	5 (21,7)	19 (79,2)	0	3 (50,0)		
High	16 (69,6)	1 (4,2)	0	0		

Median (IQR)

*: Kruskal–Wallis test

**: Fisher–Halton–Freeman test

post hoc: For the Kruskal–Wallis test, the Mann–Whitney U test was used; for the Fisher–Halton–Freeman test, the Fisher's exact test was used

DISCUSSION

Nowadays, patients increasingly turn to digital platforms to access health-related information quickly and easily. While video-sharing sites like YouTube attract attention with their visual content, the lack of scientific oversight may lead to the spread of inaccurate or misleading information (7, 17). Especially in musculoskeletal disorders, evaluating the quality and reliability of digital content is a critical need for patient education and digital health literacy.

In this study, YouTube videos related to thumb CMC osteoarthritis were evaluated in terms of content quality and informational reliability. The majority of the 60 analyzed videos addressed clinically relevant topics, including general information, injection techniques, and surgical treatment options. Videos uploaded by physicians achieved significantly higher mDISCERN, GQS, and JAMA scores compared to other uploader groups. This finding is consistent with previous research showing that health professional–produced content generally exhibits greater reliability and structural accuracy (17-22). Such differences may stem from physicians' advanced medical knowledge and stronger adherence to evidence-based guidelines. In this context,

anchoring digital content creation to current, evidence-based clinical guidelines could be an effective strategy to enhance both the accuracy and the educational value of health-related information on YouTube.

In our study, it was found that 78.3% of the most-viewed videos were uploaded by healthcare professionals such as physicians and physiotherapists. This suggests that users tend to prefer professional sources when seeking health-related information. Similarly, a study by Özdemir et al. reported that videos created by healthcare professionals achieved higher view counts (23). In this context, the active involvement of healthcare professionals in producing content on digital platforms plays a critical role in promoting accurate health literacy.

In our study, 26.7% (n=16) of the videos were classified as low quality, 45% (n=27) as moderate quality, and 28.3% (n=17) as high quality. When structural content adequacy was assessed, the median JAMA score was calculated as 2.00 (IQR: 2.00–3.00). This indicates that many videos lacked key components such as authorship, attribution, disclosure, and currency, reflecting a limited presentation of structured information. On the other hand, previous studies focusing on musculoskeletal disorders have shown that the quality of YouTube videos varies considerably; while some videos exhibit low quality and limited reliability, others meet high-quality standards (24-27). These discrepancies may be attributed to factors such as the clinical complexity of the diseases studied, differences in video selection criteria, and the diversity of evaluation tools used. Therefore, to enhance the quality of health-related content on digital platforms, it is essential to adopt standardized assessment criteria and prioritize content created by healthcare professionals.

In our study, no statistically significant relationship was found between video reliability and quality scores (JAMA, GQS, and mDISCERN) and user engagement metrics such as the number of views, likes, and comments. This finding suggests that high-quality content is not necessarily preferred by users and that video popularity is not directly associated with informational accuracy. Similarly, several YouTube content analyses on various topics have also reported no significant correlation between video quality and user engagement levels (28, 29). This indicates that users often select content based on superficial features such as title, visuals, duration, or presentation style rather than scientific merit. Therefore, healthcare professionals should not only focus on producing scientifically accurate content but also develop comprehensive communication strategies that enhance the visibility of their content on digital platforms by considering audience-appropriate language, presentation techniques, and platform algorithms.

In the literature, only one similar study has evaluated YouTube videos related to thumb CMC osteoarthritis. Conducted by Villafañe et al. in 2018, this study assessed only ten exercise-focused videos and found their overall educational quality to be low. It exclusively addressed exercise-based conservative treatments and did not include other relevant content areas such as general information on thumb CMC osteoarthritis, injection techniques, or surgical approaches. In addition, the study's small sample size and limited evaluation criteria considerably restricted

the generalizability of its findings (30). In this context, our study addresses a critical gap in the literature by employing a multidimensional approach that encompasses content diversity, uploader profiles, user engagement, and quality assessment using three validated tools.

This study has several limitations. First, our analysis was based on a cross-sectional screening of YouTube data conducted on a specific date (June 1, 2025). However, due to the dynamic nature of the platform, new videos are continuously uploaded, and the engagement metrics (e.g., views, likes, comments) of existing videos can change rapidly over time. Second, only videos published in English were included in the analysis, which may have resulted in the exclusion of content produced in different cultural and linguistic contexts. Third, the sample size was relatively limited, and the analysis was restricted to videos appearing within the first three pages of search results. Although this approach reflects the content most readily accessible to users, it may not fully capture the diversity of available material. Fourth, while the tools used to assess video quality and reliability (mDISCERN, GQS, and JAMA criteria) are structured and widely adopted, such evaluations may still involve a certain degree of subjective interpretation. Finally, YouTube's ranking algorithm, which prioritizes user behavior and popularity metrics, may favor engaging content over scientifically accurate information potentially influencing the selection of videos included in the analysis.

CONCLUSION

Our study showed that YouTube videos on thumb CMC osteoarthritis vary in quality and reliability, with those uploaded by healthcare professionals achieving higher evaluation scores. Active participation of healthcare professionals in producing accurate, evidence-based digital content is key to improving the quality and reliability of health information on platforms like YouTube. This helps ensure that online medical information meets professional standards and supports informed decisions.

Developing and applying standardized, guideline-based production frameworks can promote high-quality health resources. Global implementation of such frameworks could enhance digital health literacy and improve access to trustworthy information.

Key Points

•A significant portion of YouTube videos related to thumb CMC osteoarthritis were found to be of moderate or low quality based on mDISCERN, GQS, and JAMA scores.

•Videos uploaded by physicians had significantly higher quality and reliability scores compared to other uploader groups.

•There was no meaningful correlation between user engagement metrics (views, likes, comments) and the scientific quality of the videos.

•The study highlights the need for healthcare professionals to contribute more actively to online health content to ensure reliable information dissemination.

Conflict of Interest

The authors declare no conflict of interest.

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REFERENCES

1. Kloppenburg M, Kroon FP, Blanco FJ, et al. 2018 update of the EULAR recommendations for the management of hand osteoarthritis. Ann Rheum Dis. 2019;78:16-24.

2. van der Oest MJW, Duraku LS, Andrinopoulou ER, et al. The prevalence of radiographic thumb base osteoarthritis: a meta-analysis. Osteoarthritis Cartilage. 2021;29:785-92.

3. Esteban Lopez LMJ, Hoogendam L, Vermeulen GM, et al. Long-Term Outcomes of Nonsurgical Treatment of Thumb Carpometacarpal Osteoarthritis: A Cohort Study. J Bone Joint Surg Am. 2023;105:1837-45.

4. Teunissen JS, Wouters RM, Bierma-Zeintra SMA, et al. The prevalence, incidence, and progression of radiographic thumb base osteoarthritis in a population-based cohort: the Rotterdam Study. Osteoarthritis Cartilage. 2022;30:578-85.

5. Kroon FP, Rubio R, Schoones JW, Kloppenburg M. Intra-Articular Therapies in the Treatment of Hand Osteoarthritis: A Systematic Literature Review. Drugs Aging. 2016;33:119-33.

6. Spaans AJ, van Minnen LP, Kon M, et al. Conservative treatment of thumb base osteoarthritis: a systematic review. J Hand Surg Am. 2015;40:16-21.e1-6.

7. Madathil KC, Rivera-Rodriguez AJ, Greenstein JS, Gramopadhye AK. Healthcare information on YouTube: A systematic review. Health Informatics J. 2015;21:173-94.

8. Mohamed F, Shoufan A. Users' experience with health-related content on YouTube: an exploratory study. BMC Public Health. 2024;24:86.

9. Osman W, Mohamed F, Elhassan M, Shoufan A. Is YouTube a reliable source of health-related information? A systematic review. BMC Med Educ. 2022;22:382.

10. Sampson M, Cumber J, Li C, et al. A systematic review of methods for studying consumer health YouTube videos, with implications for systematic reviews. PeerJ. 2013;1:e147.

11. Onder ME, Zengin O. YouTube as a source of information on gout: a quality analysis. Rheumatol Int. 2021;41:1321-8.

12. Uzun O. Assessment of Reliability and Quality of Videos on Medial Epicondylitis Shared on YouTube. Cureus. 2023;15:e37250.

13. Bolac R, Ozturk Y, Yildiz E. Assessment of the Quality and Reliability of YouTube Videos on Fuchs Endothelial Corneal Dystrophy. Beyoglu Eye J. 2022;7:134-9.

14. Bai G, Pan X, Zhao T, et al. Quality Assessment of YouTube Videos as an Information Source for Testicular Torsion. Front Public Health. 2022;10:905609.

15. Hernández-García I, Giménez-Júlvez T. Characteristics of YouTube Videos in Spanish on How to Prevent COVID-19. Int J Environ Res Public Health. 2020;17.

16. Khatri P, Singh SR, Belani NK, et al. YouTube as source of information on 2019 novel coronavirus outbreak: a cross sectional study of English and Mandarin content. Travel Med Infect Dis. 2020;35:101636.

17. Delli K, Livas C, Vissink A, Spijkervet FK. Is YouTube useful as a source of information for Sjögren's syndrome? Oral Dis. 2016;22:196-201.

18. Hoy JF, Kim JH, Smith SR, Simcock XC. Quality and Reliability Analysis of YouTube as a Source for Patient Education on Dupuytren's Contracture. J Hand Surg Glob Online. 2024;6:313-8.

19. Ozsoy-Unubol T, Alanbay-Yagci E. YouTube as a source of information on fibromyalgia. Int J Rheum Dis. 2021;24:197-202.

20. Celik H, Polat O, Ozcan C, et al. Assessment of the Quality and Reliability of the Information on Rotator Cuff Repair on YouTube. Orthop Traumatol Surg Res. 2020;106:31-4.

21. Tarihci Cakmak E, Celik S. Characteristics, reliability, and quality of YouTube videos on meralgia paresthetica: a descriptive cross-sectional study. Acta Neurol Belg. 2024;124:1343-51.

22. Limon M, Tezcan D. YouTube as a source of information on reactive arthritis: a quality analysis. Z Rheumatol. 2024;83:359-66.

23. Ozdemir Kacer E, Kacer I. Evaluating the quality and reliability of YouTube videos on scabies in children: A cross-sectional study. PLoS One. 2024;19:e0310508.

24. ÖRÜCÜ Atar M, ÖZcan F. Quality and Reliability of Healthcare Information Associated with De Quervain's Tenosynovitis on YouTube Platform: A Cross-Sectional Study. J PMR Sci. 2023:133-9.

25. Pathuri M, Reddy S, Dagher T, et al. Comparative Analysis of Knee Osteoarthritis Treatment Information on Popular Social Media Platforms. J Am Acad Orthop Surg Glob Res Rev. 2025;9.

26. Kwak D, Park JW, Won Y, Kwon Y, Lee JI. Quality and reliability evaluation of online videos on carpal tunnel syndrome: a YouTube video-based study. BMJ Open. 2022;12:e059239.

27. Yılmaz R, Karpuz S. The quality and reliability of Turkish websites in Google containing information about amputation rehabilitation in the shadow of the earthquake disaster. Anadolu Klin. 2023;28:266-75.

28. Karapınar M, Abit Kocaman A. Quality and Reliability of YouTube Videos as a Source of Information Regarding Exercises to Prevent Sarcopenia: Content Analysis. Topics in Geriatric Rehabilitation. 2025;41:88-94.

29. Kesimal B, Demircan SG, Kocamış S. Evaluating the Quality and Reliability of YouTube Videos on Optic Neuritis: A Cross-Sectional Study Using Validated Scoring Systems. Clin Exp Ophthalmol. 2025.

30. Villafañe JH, Cantero-Tellez R, Valdes K, Usuelli FG, Berjano P. Educational Quality of YouTube Videos in Thumb Exercises for Carpometacarpal Osteoarthritis: A Search on Current Practice. Hand (N Y). 2018;13:715-9.