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RESEARCH ARTICLE

Are YouTube Videos Reliable for Calcific Tendinitis of the Shoulder? A Comprehensive Analysis of Accuracy, Quality, and Content

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ABSTRACT

Objective: This study evaluates the accuracy, quality, reliability, and content of 56 YouTube videos on calcific tendinitis of the shoulder. Data on views, likes, dislikes, video type, duration, content, view rate, and upload date were recorded. The videos were assessed using DISCERN, JAMA, GQS, and VPI scores to measure quality and educational value.

Materials and Methods: In June 2024, three orthopedic surgeons analyzed 56 YouTube videos on "Calcific tendinitis of shoulder" using DISCERN, JAMA, GQS, and VPI. Data were analyzed with SPSS, using descriptive statistics and the Kruskal-Wallis test for non-normally distributed data (p=0.05), while Spearman correlation assessed variable relationships.

Results: The analysis revealed reliable GQS, DISCERN, and JAMA scores. The average video duration was 376 seconds, with 153,936 views and 3,397 likes. DISCERN scores ranged from 20.33 to 70.67, JAMA from 1 to 4, and GQS from 1 to 4.67. Most videos focused on disease and treatment, with 60.7% created by doctors. Doctor-produced content had significantly higher DISCERN, GQS, and JAMA scores, with strong correlations between these metrics.

Conclusion: This study found that most YouTube videos on calcific tendinitis are of moderate quality, with higher-quality videos produced by doctors. A strong correlation between JAMA, DISCERN, and GQS scores indicates consistent quality across these measures. The study highlights the need for better health-related video content on platforms like YouTube to provide accurate, reliable information to patients. Future research could expand this analysis to other social media platforms.

Keywords: Calcific tendinitis of shoulder, content analysis, quality analysis, Youtube

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INTRODUCTION

Shoulder calcific tendinitis (CT) is a common painful disease affecting 3–7% of adults in the population. It is most commonly seen in women between the ages of 30 and 60. There are different classifications, and depending on the stage, both the clinical findings in patients and the treatment options can vary significantly.[1,2]

Patients prefer platforms like the internet, where they can easily access information about their diseases and find answers to their questions.[3,4] Studies have shown that people use social media platforms to seek advice, share personal experiences, and obtain information about treatment processes related to certain diseases.[5] At the same time, the internet is a popular source that patients use to access what

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they consider to be up-to-date information about their diseases. Approximately 80% of internet users can access the health information they need using web-based platforms such as Google.[6–8] More than 50% of the internet-enabled population in North America searches for health-related information online at least once a month.[9,10] YouTube, used for this purpose, is one of the platforms where more than 100 million hours of video are watched per day, and approximately 300 videos are uploaded per minute.[3] Patients can access health-related YouTube videos without any obstacles, but because these videos are uploaded without undergoing a peer-review process, they may encounter incomplete, incorrect, or misleading information.[7,11] According to a study by Fox and Rainie, 44% of patients who search for health-related information on the internet believe that the information is only partially reliable, and 86% have doubts about its accuracy.[9] Since patient satisfaction is directly related to the accuracy and reliability of information, it is important that patients receive accurate and reliable information.[12]

Patients can easily access videos on social media platforms for informational purposes; however, the accuracy and reliability of these videos remain questionable. To date, no study in the literature has evaluated the quality, reliability, accuracy, and content of informative YouTube videos on calcific tendinitis of the shoulder. Therefore, this study aims to assess the quality of popular videos appearing on the first pages of YouTube searches related to shoulder calcific tendinitis and to identify videos that provide accurate and reliable medical information.

MATERIALS and METHODS

A YouTube video channel was independently analyzed in June 2024 by three different orthopedic surgeons using two keywords: "Calcific tendinitis of shoulder" and "Calcific tendonitis of the shoulder." It was observed that videos appeared in a similar ranking for both keywords. Among these videos, duplicate, non-functional, source-unknown, irrelevant, and videos with unclear like and subscriber counts were excluded. Analysis continued with the remaining 56 videos. Therefore, 56 videos were analyzed based on queries using the keyword "Calcific tendinitis of shoulder."

To analyze the videos, criteria such as number of views, number of dislikes and likes, channel name, content, source, video duration, how many days ago the video was uploaded, how many subscribers, and number of comments were determined. The quality, reliability, accuracy, and content analysis of the videos was conducted using four different methods: DISCERN, the Journal of the American Medical Association (JAMA) scoring system, Global Quality Score (GQS), and finally, the Video Power Index (VPI). These tools were selected as they provide a rigorous and standardized framework, ensuring a comprehensive assessment of both the credibility and the influence of health-related media.

The DISCERN includes 15 essential questions, along with an overall quality rating, to evaluate the quality of videos. Each question addresses a distinct quality criterion—an essential aspect or standard that contributes to providing reliable and high-quality information about treatment options. Each question is scored on a 5-point scale, and the total score is presented on a range from 15 to 75. The results are categorized based on the score range as follows: 63 to 75 is considered excellent, 51 to 62 as good, 39 to 50 as fair, 28 to 38 as poor, and below 28 as very poor (Table 1).

The JAMA scoring system is another tool used to assess health-related videos. It is based on four main criteria and assigns a score between 0 and 4, with 4 points indicating a high level of quality (Table 2). The GQS assesses the educational content of videos based on five criteria. The quality definitions for each GQS score, ranging from 1 to 5, are clearly outlined. A video that scores five points is considered to have high educational quality (Table 3).

VPI, which has been used in other studies in the literature, is an index that measures the popularity of a video based on its likes and views, formulated as '(like ratio×view ratio) / 100'. The like ratio is formulated as '(likes×100) / (likes + dislikes)', while the view ratio is defined as 'views per day'.[3,11,13–19]

Statistical Analysis

Data collected in Microsoft Excel were analyzed with SPSS version 12. Video characteristics, video reliability, and quality/content scores were measured using descriptive statistics. Video characteristics and related continuous variables, such as JAMA, DISCERN, and GQS, were reported using means and standard deviations. Quantitative variables were compared using the Kruskal–Wallis test for intergroup analysis of non-normally distributed data. A p-value of 0.05 was used as the threshold for statistical significance. The Spearman's correlation test was used to analyze the relationships between quantitative variables. For each correlation, a 95% confidence interval was reported. Correlation was classified as poor (0.00–0.20), fair (0.21–0.40), moderate (0.41–0.60), good (0.61–0.80), or excellent (0.81–1.00).

Ethical Consideration

Ethical approval for this study was granted by the Ethics Committee of the University of Health Sciences Istanbul Kanuni Sultan Suleyman Training and Research Hospital

Table 1. DISCERN evaluation scale

	Questions	Rating the question				
Section 1	**Is the publication reliable?**	**No**		**Partially**		**Yes**
1	Are the aims clear?	1	2	3	4	5
2	Does it achieve its aims?	1	2	3	4	5
3	Is it relevant?	1	2	3	4	5
4	Is it clear what sources of information were used to compile the publication (other than the author or producer)?	1	2	3	4	5
5	Is it clear when the information used or reported in the publication was produced?	1	2	3	4	5
6	Is it balanced and unbiased?	1	2	3	4	5
7	Does it provide details of additional sources of support and information?	1	2	3	4	5
8	Does it refer to areas of uncertainty?	1	2	3	4	5
Section 2	**How good is the quality of information on treatment choices?**	**No**		**Partially**		**Yes**
9	Does it describe how each treatment works?	1	2	3	4	5
10	Does it describe the benefits of each treatment?	1	2	3	4	5
11	Does it describe the risks of each treatment?	1	2	3	4	5
12	Does it describe what would happen if no treatment is used?	1	2	3	4	5
13	Does it describe how the treatment choices affect overall quality of life?	1	2	3	4	5
14	Is it clear that there may be more than one possible treatment choice?	1	2	3	4	5
15	Does it provide support for shared decision-making?	1	2	3	4	5
Section 3	**Overall rating of the publication**	**Low**		**Moderate**		**High**
16	Based on the answers to all of the above questions, rate the overall quality of the publication as a source of information about treatment choices	1	2	3	4	5

No (1): Given if the quality criterion is not met; partially (2–4): Given if the criterion is partially met, based on the extent of shortcomings; yes (5): Given if the quality criterion is fully met; low: Serious or extensive shortcomings; moderate: Potentially important but not serious shortcomings; high: Minimal shortcomings.

Table 2. Journal of the American Medical Association (JAMA) scoring system

	The core standards
Authorship	Authors and contributors, their affiliations, and relevant credentials should be provided
Attribution	References and sources for all content should be listed clearly, and all relevant copyright information should be noted
Disclosure	Website 'ownership' should be prominently and fully disclosed, as should any sponsorship, advertising, underwriting, commercial funding arrangements or support, or potential conflicts of interest
Currency	Dates that content was posted and updated should be indicated

Table 3. Explanation of the five-point global quality score

Global score	Global score description
1	Poor quality, poor flow of the site, most information missing, not at all useful for patients
2	Generally poor quality and poor flow, some information listed but many important topics missing, of very limited use to patients
3	Moderate quality, suboptimal flow, some important information is adequately discussed but others poorly discussed, somewhat useful for patients
4	Good quality and generally good flow, most of the relevant information is listed, but some topics not covered, useful for patients
5	Excellent quality and excellent flow, very useful for patients

Table 4. Information on the evaluated youtube videos about calcific tendinitis of the shoulder

Video no.	Uniform Resource Locator (URL)	Producer	Content	Source	Date of publication	Video duration in seconds
D1	https://youtu.be/3gnyGXpj4sg	Nabil Ebraheim	Physiotherapy	Doctor	10.12.2021	240
D2	https://youtu.be/dUJ6Y2kQpsU	Liebscher & Bracht –The Pain Specialists	Disease and treatment	Pain specialist	28.05.2021	202
D3	https://youtu.be/JoXdXZnt6po	Liebscher & Bracht –The Pain Specialists	Physiotherapy	Sports trainer	11.11.2020	228
D4	https://youtu.be/H4Y8hNxLyQc	Dr.Jorge A.Gonzalez	Physiotherapy	Doctor	24.06.2023	269
D5	https://youtu.be/f51BZe-esp0	First Look MRI -Power to the Patient	Diagnosis	Patient	08.05.2023	71
D6	https://youtu.be/Ht0Ef8BtV4A	Shoulderspecialists	Treatment	Doctor	02.05.2017	663
D7	https://youtu.be/ycphj08OJt0	Nabil ebraheim	Disease and treatment	Doctor	28.01.2012	190
D8	https://youtu.be/BbQLjunl3iU	First Look MRI -Power to the Patient	Disease	Patient	20.09.2021	89
D9	https://youtu.be/t6dp1CvHgUI	Columbia Radiology	Disease and treatment	Doctor	10.05.2022	109
D10	https://youtu.be/-I6pMM2VTdw	SteveMoraMD #thePecTearSurgeon	Diagnosis and treatment	Doctor	18.06.2021	202
D11	https://youtu.be/E7Vo1e45F1I	ELvation Medical	Treatment	Commercial advertisement	08.07.2020	38
D12	https://youtu.be/p1Ic7ArQgiA	Bob & Brad	Disease and treatment	Physiotherapyst	21.11.2016	659
D13	https://youtu.be/L1HXng2DGC4	Dr DeFabio	Physiotherapy	Doctor	28.03.2017	211
D14	https://youtu.be/NRSV8kkjKAg	AskDoctorJo	Physiotherapy	Doctor	18.08.2017	696
D15	https://youtu.be/sItaYVga_ns	Dr Tarek Ibrahim Ahmad OrthoClinic	Disease and treatment	Doctor	05.09.2022	363
D16	https://youtu.be/Cmg0Uau6nJg	Dr.Jorge A.Gonzalez	Treatment	Doctor	19.02.2021	64
D17	https://youtu.be/wTEOEod9Ang	Adam Fields DC	Physiotherapy	Physiotherapyst	29.03.2020	652
D18	https://youtu.be/gGHMD9sJiM8	Nick Ferran @ Shoulder & Elbow London Ltd	Treatment	Doctor	22.07.2022	221
D19	https://youtu.be/9uMoPYt-rP0	Mayo Clinic	Treatment	Doctor	15.01.2013	125
D20	https://youtu.be/BBKaZlwLSU0	Nick Ferran @ Shoulder & Elbow London Ltd	Disease	Doctor	01.07.2021	122
D21	https://youtu.be/ELl1jKJXnRQ	Nick Ferran @ Shoulder & Elbow London Ltd	Treatment	Doctor	01.07.2021	97
D22	https://youtu.be/1pz2QYNTyOo	Lake Washington Sports & Spine	Treatment	Doctor	15.09.2017	225
D23	https://youtu.be/snnwzZN7fik	Kevin Kruse MD	Disease and treatment	Doctor	10.12.2021	277
D24	https://youtu.be/SFF5Dycq374	Complete Physio	Treatment	Commercial Advertisement	14.10.2021	139
D25	https://youtu.be/IQlaMzKxuOU	First Look MRI- Power to the Patient	Disease	Patient	08.05.2021	141
D26	https://youtu.be/uV-VxBgUpDE	laithfarjomd	Disease and surgery	Doctor	06.06.2010	346
D27	https://youtu.be/kQHMigTRrw4	Don Buford, MD	Surgery	Doctor	25.12.2015	1252
D28	https://youtu.be/5E5HsulA2jo	Adam Fields DC	Physiotherapy	Physiotherapyst	29.03.2020	807
D29	https://youtu.be/tYNd6hmbJEA	The Whole Shebang	Disease and treatment	Patient	19.05.2020	841
D30	https://youtu.be/pjA7bS-3r5w	Orthobullets	Disease and treatment	Doctor	12.05.2021	441
D31	https://youtu.be/6hcHjEH3Hcc	SteveMoraMD #thePecTearSurgeon	Surgery	Doctor	29.08.2020	335
D32	https://youtu.be/jqxbn8a_0JY	Practical Pain Management with Dr. Lee	Treatment	Doctor	25.06.2021	316

Table 4. Cont.

Video no.	Uniform Resource Locator (URL)	Producer	Content	Source	Date of publication	Video duration in seconds
D33	https://youtu.be/KRQhqSVtsow	William Brougham	Disease	Patient	10.05.2013	545
D34	https://youtu.be/qV1wFyFhcdw	Eduardo Filipe Coaching	Disease and treatment	Patient	12.02.2023	467
D35	https://youtu.be/mCTYVMYI22A	Eduardo Filipe Coaching	Disease	Patient	02.10.2019	380
D36	https://youtu.be/O0L1I5drovo	Advance Hospitals	Disease and treatment	Doctor	23.05.2020	363
D37	https://youtu.be/-e8cS9UFukY	AskDoctorJo	Physiotherapy	Physiotherapyst	17.08.2017	793
D38	https://youtu.be/rvkCQz7R1VM	Professional Orthopaedic Associates	Disease	Doctor	24.04.2012	122
D39	https://youtu.be/HRIYp7StbN8	TenJet HydroCision Inc	Disease and treatment	Doctor	30.07.2020	1094
D40	https://youtu.be/lECBNZriI-4	Elevate Health UK	Disease and physiotherapy	Sports trainer	11.10.2022	455
D41	https://youtu.be/ZXZZ3qYEzIc	William Brougham	Disease	Patient	28.09.2012	477
D42	https://youtu.be/gw2-3NHa7a0	Dr. Scott Weiss	Treatment	Doctor	02.11.2023	274
D43	https://youtu.be/IADuLlE1KH8	Dr Pradeep Kocheeppan	Disease and treatment	Doctor	23.05.2022	174
D44	https://youtu.be/e_e8YRRc9vE	The Whole Shebang	Disease and treatment	Patient	28.05.2020	185
D45	https://youtu.be/uJ5R0F-BTcM	Dr. Robert Purchase, Orthopedic Surgeon	Disease	Doctor	23.01.2016	214
D46	https://youtu.be/2nLMrDBRrXw	William Brougham	Disease and surgery	Patient	22.11.2012	538
D47	https://youtu.be/_K_xunoU9NM	Synergy Wellness Chiropractic & Physical Therapy PLLC	Disease	Physiotherapyst	04.05.2022	309
D48	https://youtu.be/GPfRQsgV8PQ	Motivationaldoc	Physiotherapy	Doctor	14.05.2017	1203
D49	https://youtu.be/B2tJQ1NfSGs	Javier de la Fuente	Disease and treatment	Pain specialist	29.07.2018	957
D50	https://youtu.be/n4SGhw5hE5U	Dr. David Lintner	Disease and treatment	Doctor	25.09.2013	399
D51	https://youtu.be/kuhWUlOdCfk	Comprehensive, RheumatologyCenter	Surgery	Doctor	22.12.2023	115
D52	https://youtu.be/38Us7HbwM2I	Bob & Brad	Treatment	Physiotherapyst	11.09.2020	488
D53	https://youtu.be/KAEEOsPYij0	Peak Form Health Center	Disease and treatment	Doctor	15.12.2021	239
D54	https://youtu.be/rQEAebjn2ok	Brad Carofino	Treatment	Doctor	23.02.2017	131
D55	https://youtu.be/UZ0sjDYW2-Y	Aster Hospitals, Bangalore	Surgery	Doctor	31.08.2021	97
D56	https://youtu.be/WEn3tQQqzF8	Jeffrey Peng MD	Disease and treatment	Doctor	15.09.2022	432

Table 5. Results related to the evaluated videos on calcific tendinitis of the shoulder on YouTube

Video no.	Days since upload	Number of views	Number of likes	Number of dislikes	JAMA	DISCERN	Grade DISCERN	GQS	VPI
D1	916	116390	1700	26	3	63.00	Excellent	3.33	125.15
D2	1113	58808	1300	40	2	32.33	Poor	1.67	51.26
D3	1311	52766	1400	26	2	33.67	Poor	1.67	39.51
D4	356	9589	117	3	1	44.33	Fair	2.67	26.26
D5	403	2224	36	0	1	43.33	Fair	2.67	5.52
D6	2582	132283	647	42	4	70.00	Excellent	4.67	48.11
D7	4522	148620	1000	17	3	64.67	Excellent	4.00	32.32
D8	999	2209	28	0	1	41.33	Fair	2.00	2.21
D9	767	11342	51	0	3	55.33	Good	3.67	14.79
D10	1093	10407	114	0	1	41.67	Fair	1.33	9.52
D11	1438	2180	5	0	1	20.67	Very poor	1.00	1.52
D12	2763	622837	12000	235	2	39.00	Fair	2.67	221.09
D13	2636	252922	5500	75	3	52.67	Good	3.67	94.66
D14	2493	499897	8100	198	3	54.67	Good	3.67	195.74
D15	649	7243	80	0	3	66.00	Excellent	4.00	11.16
D16	1212	13875	77	9	3	47.33	Fair	2.33	10.25
D17	1539	331239	4200	140	3	39.33	Fair	2.67	208.29
D18	694	63984	727	5	3	58.00	Good	2.67	91.57
D19	4169	80613	414	29	2	45.67	Fair	2.67	18.07
D20	1080	25115	249	1	2	45.00	Fair	3.00	23.16
D21	1080	23286	197	24	2	45.33	Fair	3.00	19.22
D22	2465	148065	6658	28	2	32.67	Poor	2.33	59.82
D23	918	2663	34	0	3	61.33	Good	3.33	2.90
D24	975	9238	64	0	1	26.33	Very poor	2.00	9.47
D25	1134	1231	21	0	1	21.67	Very poor	1.33	1.09
D26	5123	57343	111	8	4	63.33	Excellent	4.67	10.44
D27	3095	7860	26	2	3	45.00	Fair	2.33	2.36
D28	1539	751072	9700	401	3	42.67	Fair	2.67	468.65
D29	1488	22432	315	15	1	20.33	Very poor	1.33	14.39
D30	1130	2004	42	0	4	70.67	Excellent	4.67	1.77
D31	1386	886	13	0	3	42.00	Fair	1.67	0.64
D32	1086	13994	201	6	2	31.33	Poor	2.33	12.51
D33	4054	3751	29	0	1	21.67	Very poor	1.00	0.93
D34	489	3739	70	0	1	25.00	Very poor	2.00	7.65
D35	1718	16087	241	10	1	23.67	Very poor	2.00	8.99
D36	1485	6562	67	3	2	39.33	Fair	2.67	4.23
D37	2495	332436	5800	148	3	63.33	Excellent	3.67	129.93
D38	4436	10442	47	5	3	60.67	Good	3.33	2.13
D39	1417	1617	12	0	3	66.00	Excellent	4.33	1.14
D40	614	1691	27	0	1	39.67	Fair	2.67	2.75
D41	4279	66036	355	31	1	26.67	Very poor	2.00	14.19
D42	227	758	10	0	3	59.00	Good	3.67	3.34
D43	755	3433	15	0	3	57.67	Good	3.33	4.55

Table 5. Cont.

Video no.	Days since upload	Number of views	Number of likes	Number of dislikes	JAMA	DISCERN	Grade DISCERN	GQS	VPI
D44	1480	1639	21	0	1	41.67	Fair	2.33	1.11
D45	3067	6169	21	0	3	61.33	Good	3.33	2.01
D46	4233	10951	58	0	1	33.33	Poor	2.33	2.59
D47	783	1086	27	0	3	40.67	Fair	3.00	1.39
D48	2599	4298362	123000	2500	2	23.67	Very Poor	1.67	1620.91
D49	2158	19970	169	4	2	34.67	Poor	2.33	9.04
D50	3926	26006	67	4	2	20.67	Very Poor	1.33	6.25
D51	181	41	0	0	3	26.00	Very Poor	2.33	0
D52	1384	246633	4000	65	2	36.33	Poor	2.67	175.35
D53	923	30698	287	4	3	47.33	Fair	3.33	32.80
D54	2680	2387	10	0	2	22.33	Very Poor	1.33	0.89
D55	1029	3102	20	0	3	65.67	Excellent	4.00	3.01
D56	649	42208	758	11	3	61.00	Good	4.00	64.11

JAMA: Journal of the American Medical Association; GQS: Global Quality Score; VPI: Video Power Index

(No: 2025.03.69, dated 12.03.2025). The research was conducted in full compliance with the principles outlined in the Declaration of Helsinki.

RESULTS

As a result of the established criteria, 56 videos were analyzed. The quality, reliability, and accuracy values for the criteria used in the content analysis of the videos were 0.95 for GQS, 0.98 for DISCERN, and 0.93 for JAMA, and these values were found to demonstrate reliability.

Tables 4 and 5 contain data on the 56 YouTube videos that were analyzed. For these 56 videos, their sources and content were initially examined. After this examination, the VPI, JAMA, DISCERN, Grade DISCERN, and GQS results were generated and recorded in the relevant tables.

The detailed data, including the arithmetic mean, minimum, maximum, and standard deviation for variables such as video length, view count, likes, dislikes, comments, subscriber count, and various scoring metrics, are presented in Table 6.

According to the analysis presented in Table 7, based on the content of the 56 videos, 4 are related to surgery (7.1%), 9 to physiotherapy (16.1%), 9 to disease (16.1%), 2 to "disease and surgery" (3.6%), 1 to "disease and physiotherapy" (1.8%), 17 to "disease and treatment" (30.4%), 12 to treatment (21.4%), 1 to diagnosis (1.8%), and 1 to "diagnosis and treatment" (1.8%).

According to the source evaluations, 34 videos were created by doctors (60.7%), 2 by pain specialists (3.6%), 6 by physiotherapists (10.7%), 10 by patients (17.9%), 2 by sports trainers (3.6%), and 2 were commercial advertisements (3.6%).

Table 6. Demographic analysis and results of youtube videos on calcific tendinitis of the shoulder

Descriptive statistics	Min	Max	Mean	SD
Video duration (second)	38	1252	376.46	293.60
View count	41	4298362	153936	584691
Days since uploaded	181	5123	1807	1278
Like count	0	123000	3397	16480
Dislike count	0	2500	73	337
Number of subscribers	3	8910000	517878	1540009
Comment count	0	8092	221	1080
Like ratio	0	100	96.02	13.38
View ratio	0.23	1653.85	71.94	230.62
JAMA	1	4	2.27	0.92
GQS	1.00	4.67	2.72	0.96
DISCERN	20.33	70.67	43.80	15.04
VPI	0	1620.91	70.23	225.71

Min: Minimum; Max: Maximum; SD: Standard deviation

Based on the detailed DISCERN score in Table 7, nine (16.1%) videos were excellent, ten (17.9%) were good, eighteen (32.1%) were fair, seven (12.5%) were poor, and twelve (21.4%) were very poor.

As a result of the evaluation based on the GQS score in Table 7, 3 videos (5.4%) were rated as excellent quality with good flow and very useful for patients, 10 videos (17.9%) as good

Table 7. Counts and percentages of evaluated YouTube videos

	Count	Percent		Count	Percent
Content			DISCERN		
Surgery	4	7.1	Very poor	12	21.4
Physiotherapy	9	16.1	Poor	7	12.5
Disease	9	16.1	Fair	18	32.1
Disease and surgery	2	3.6	Good	10	17.9
Disease and physiotherapy	1	1.8	Excellent	9	16.1
Disease and treatment	17	30.4	Total	56	100
Treatment	12	21.4	GQS		
Diagnosis	1	1.8	1	7	12.5
Diagnosis and treatment	1	1.8	2	17	30.4
Total	56	100	3	19	33.9
Source			4	10	17.9
Doctor	34	60.7	5	3	5.4
Pain specialist	2	3.6	Total	56	100
Physiotherapist	6	10.7	JAMA		
Patient	10	17.9	1	15	26.8
Sports trainer	2	3.6	2	14	25.0
Commercial advertisement	2	3.6	3	24	42.9
Total	56	100	4	3	5,4
			Total	56	100

GQS: Global Quality Score; JAMA: Journal of the American Medical Association

quality with generally good flow, covering most relevant information but omitting some topics, thus useful for patients, 19 videos (33.9%) as moderate quality with suboptimal flow, where some important information was adequately discussed while others were poorly addressed, making them somewhat useful for patients, 17 videos (30.4%) as generally poor quality with poor flow, listing some information but missing many important topics, thus of very limited use to patients, and 7 videos (12.5%) as poor quality with poor flow, with most information missing and not at all useful for patients.

According to Table 7, JAMA: 3 videos (5.4%) received 4 points, 24 videos (42.9%) received 3 points, 14 videos (25%) received 2 points, and 15 videos (26.8%) received 1 point.

In the evaluation of YouTube video sources on shoulder calcific tendinitis, statistically significant differences were observed between the sources in terms of DISCERN, GQS, and JAMA scores ($p<0.001$). However, no significant difference was found for the VPI ($p=0.989$). Additionally, a statistical difference was found between the evaluations of doctors and patients, with doctors' assessments being more favorable, particularly in the GQS evaluation (Table 8).

To analyze the content comparison based on the data sources, the videos are presented in the relevant columns in Figure 1.

In the evaluation of the relationship between the total scores, a strong positive correlation was found between JAMA and DISCERN (0.753), between JAMA and GQS (0.744), and between DISCERN and GQS (0.901).

DISCUSSION

The aim of this study is to analyze the content, quality, reliability, and accuracy of YouTube videos about calcific tendinitis of the shoulder. Upon reviewing the scoring analyses (JAMA, GQS, DISCERN) of the videos included in the study, it was determined that the quality of content in videos related to shoulder calcific tendinitis was generally moderate. It was observed that videos rated as Excellent or Good were mostly produced by doctors. This finding supports the conclusion that patients could be misled by YouTube videos. The statement that patients may be misled is based on the risks associated with the widespread distribution of inaccurate or incomplete content that is not grounded in reliable medical information.[20]

Table 8. DISCERN, GQS, JAMA and VPI evaluations of YouTube video sources on calcific tendinitis of the shoulder

Source	N	DISCERN	GQS	JAMA	VPI
Doctor	34	50.19±14.28	3.08±0.97	2.71±0.719	75.17±276.42
Pain specialist	2	33.50±1.65	2.00±0.47	2.00±0.000	30.15±29.85
Physiotherapist	6	43.38±9.5	2.89±0.40	2.67±0.516	200.78±153.39
Patient	10	29.86±9.20	1.90±0.52	1.00±0.000	5.87±5.26
Sports trainer	2	36.66±4.24	2.17±0.70	1.50±0.707	21.13±25.99
Commercial advertisement	2	23.5±4.0	1.50±0.70	1.00±0.000	5.50±5.62
Total	56	43.80±15.04	2.72±0.97	2.27±0.924	70.23±225.71

GQS: Global Quality Score; JAMA: Journal of the American Medical Association; VPI: Video Power Index

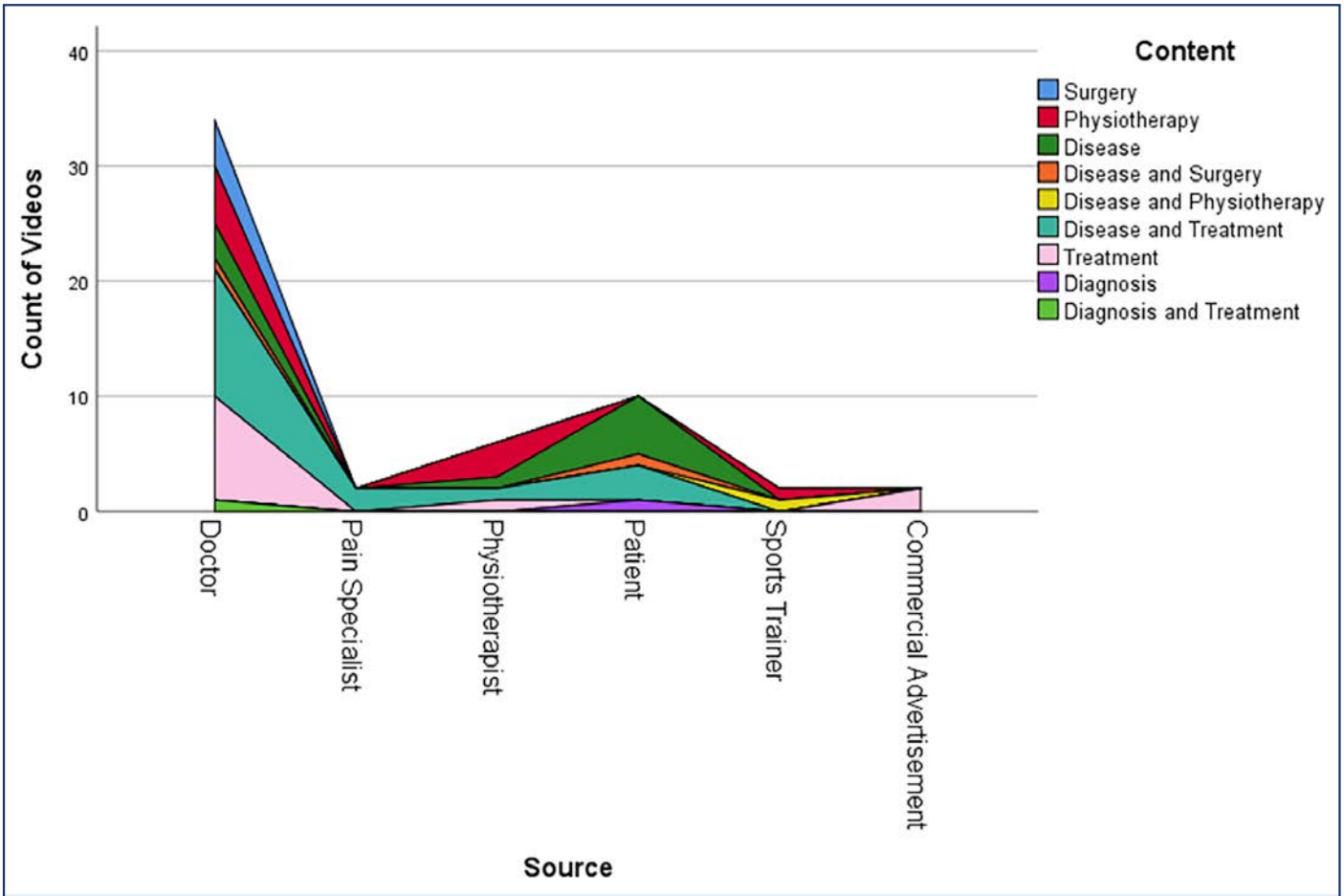

Figure 1. Analysis of video results by upload source and content type

A review of the relevant literature revealed that JAMA, DISCERN, and GQS scores have also been used in other studies.[3,4] In their study, Tekin et al.[3] reported the mean JAMA score as 2, the mean GQS score as 3.02, and the mean DISCERN score as 37.56±16.03 for hallux valgus-related videos on YouTube. Similarly, Uzun et al.[4] found that the mean JAMA score was 1.8 and the mean DISCERN score was 30.7 for YouTube videos about hallux valgus surgery.

When the analyzed videos were evaluated according to their content and sources, it was found that approximately 67% of the content focused on disease and treatment, and 60% of this content was uploaded by doctors. While

this finding is consistent with the study by Ovenden and Brooks[21] it differs from the study by Uzun et al.,[4] where the number of videos with commercial purposes was higher. This difference is believed to be due to the limited availability of commercial products for treating calcific tendinitis of the shoulder. Additionally, when examining the source of the uploads and the number of views in this study, it is clear that videos produced by doctors have higher view rates, which contrasts with some other publications in the literature.[3] This suggests that doctors specializing in calcific tendinitis of the shoulder are creating content with patient needs in mind.

Patients often turn to video content to seek information when needed. However, the information they find may not always be accurate. Misinformation can not only harm patients' health but also create significant challenges for healthcare professionals in clinical practice. Therefore, it is crucial for healthcare-related videos to be created by qualified specialists and for healthcare providers to guide patients toward reliable sources. A review of the literature found no studies analyzing videos specifically related to shoulder topics, indicating that this research is original.

The analysis of the videos in this study revealed a high positive correlation among the scoring methods used, namely JAMA, DISCERN, and GQS scores. This suggests that when the quality is high according to one of these scores, similar levels are likely to be observed in the others as well.

This study has some limitations. The search on the YouTube platform was conducted using the keywords "calcific tendinitis of shoulder," and the first 60 videos from the search results were analyzed. The internet, and consequently YouTube, are dynamic platforms, meaning that different results could be obtained with the same keywords at another time. Despite these limitations, this research is the first known study to evaluate the quality of videos related to shoulder tendinitis. In studies conducted on platforms like YouTube, the videos that appear at the top of search results are often the most viewed and engaged with by users. As a result, many studies select a specific number of videos (e.g., 50 or 60) for analysis, which allows for more manageable and analyzable outcomes. This approach assumes that users typically watch the top-ranked videos. The limit of 60 videos is a common practice in the literature, with selections often focusing on the most viewed or algorithmically promoted content. Additionally, restricting searches to a specific timeframe enhances the study's reproducibility and validity, as YouTube's results can change over time.

CONCLUSION

When evaluating YouTube videos on calcific tendinitis of the shoulder using the DISCERN, GQS, and JAMA scoring systems, it was found that the majority of the content is produced by physicians, focusing on patient information and treatment. Despite their high viewership, the overall quality of these videos is generally low. Given that patients frequently turn to the internet for health information, improving the quality of health-related videos on video-sharing platforms could enhance access to accurate and reliable information.

Disclosures

Ethics Committee Approval: The study was approved by the University of Health Sciences Istanbul Kanuni Sultan Suleyman Training and Research Hospital Ethics Committee (No: 2025.03.69, Date: 12/03/2025).

Informed Consent: Informed consent was obtained from all participants.

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