

Evaluation of Trigger Finger Information on Youtube and Video Sharing Recommendations

Haci Ali Olcar

Department of Orthopedics and Traumatology, Yozgat Public Hospital, Turkey

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***Corresponding author:** Haci Ali Olcar, Department of Orthopedics and Traumatology, Yozgat Public Hospital, Turkey.

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Abstract:

Background: The aim of this study was to examine the quality of the information in YouTube shares about trigger finger, and to make suggestions for the health shares of physicians.

Materials and methods: YouTube shares on the diagnosis, etiology and treatment of trigger finger disease were selected from English videos longer than 45 seconds with 31469 or more views. The duration of the video, the profession of the presenter, visual content, daily average views, comments, likes, DISCERN, JAMA scores were examined. Correlation analysis was performed between these parameters.

Result: The mean number of daily views of the 71 videos studied was 1262, the DISCERN score was 42.5, and the JAMA score was 2.5. The number of likes was statistically significant between the animation and the real (intraoperative) presentation of trigger finger surgery visual sharing ($p < .05$, $U=18.00$). The DISCERN mean scores of orthopaedists, the group with the highest mean score, differed significantly from speakers who did not define their profession ($x=14.50$, $p < .05$) and physiotherapists ($x=11.07$, $p < .05$).

Conclusion: In our study, the information quality of trigger finger videos was found to be fair (50-39). Our recommendation is to take care of references in the shares and enrich them with animation content. We think that a scientific value scale should be given and presented to the audience in health-related information on social media.

Keywords: trigger finger; youtube; discern count; jama count

Introduction

Trigger finger is usually characterized by thickening and swelling of the A1 pulley on the flexor tendon. It is more common in women than men (1). It can be felt as a nodule or lump in the palm. It is a pulley disorder that can cause pain and inability to perform finger functions. In the advanced stage of trigger finger disease, it may be encountered that the finger remains locked in flexion and does not come into extension. In patients, activity modification, splint (2), topical and oral non-steroidal anti-inflammatory drugs (NSAIDs) (3), corticosteroid injection (4), surgical release (5, 6) are the recommended treatment methods.

YouTube, a social media site, is one of the most common providers of video information on the Internet (7, 8). Although it is a data provider created only for sharing videos, over time it has become a tool for people to access information. The number of registered users on YouTube is more than 1.5 billion. It provides its viewers with more than 1 billion hours of content every day. Although physicians share information in the field of health and people are a source of information about their diseases, the value of information on the internet is debatable. In previous studies on YouTube shares that attract the attention of physicians, the information value and information quality of the shares related to health, illness and health services were evaluated (7, 8, and 9).

Trigger finger patients in our clinic were able to perform hand functions until the last stage of the disease, compared to other common hand problems. Patients tended to conservative treatment rather than surgical option. Patients were referring to social media information sources, even if they were not scientific about their diseases. They consulted with us, the physicians, about the reliability of this information they received from social media. In the literature review we conducted in the face of this situation; it



was stated that the quality of the information provided via YouTube channel was insufficient. Various solutions were suggested in the publications. But YouTube's hiding the dislikes in November 2021, using the dislike number as a parameter in previous broadcasts, led to the fact that it was necessary to update the existing information.

So many broadcasts on YouTube and health shares of physicians have shown that social media is an increasingly important issue among physicians. For this reason, the statistical relationships between the content of the video, its duration, the profession of the presenter and daily views, comments, likes, DISCERN, JAMA scores were examined. Thus, a different perspective was created from previous publications. We wanted to make suggestions for the sharing that physicians want to make about the disease on social media.

Health-related data traffic on social media will continue to increase day by day. This may affect the patient-physician relationship. The physician should question the information quality of such new content that patients apply, update the information obtained, and seek solutions to the problems (7). To evaluate YouTube videos associated with trigger finger disease, internationally accepted DISCERN (10), Journal of American Medical Association (JAMA) (11) scores and daily average views, comments, and likes were used. This study is the first social media study in the literature on trigger finger disease.

DISCERN scoring system is used to evaluate the reliability and quality of the information given (Table I). Scoring consists of 2 sections. In the first section, is the broadcast reliable? It is sought to be answered. In this part, 8 questions are given points between 1 and 5. In the second section 'how good is the quality of information about treatment options?', answers are sought. In this section, 7 questions are given point's between 1 and 5. The scores of the 15 questions in the two sections are summed. The quality of the information is evaluated in terms of being a resource. A minimum of 15 and a maximum of 75 scores can be obtained for a total of 15 questions. The summed score is evaluated as excellent (75-63), good (62-51), fair (50-39), poor (27-38), very poor (26-16).

JAMA Scoring System's full name is the journal Of the American Medical Association (JAMA) criteria (Table II). It is used to appreciate the basic information presented on the websites. It contains four questions. In each section, those who meet the criteria get 1 point, and those who don't get 0 points. The lowest possible score for 4 sections is '0' and the highest score is '4'.

We planned to work on YouTube, one of the oldest social media channels. With the study, we wanted to update if there is an improvement in information quality and fill the gap regarding trigger finger.

Materials and Methods

On 05-01- 2022, a search was made by typing 'trigger finger' on the YouTube search button. More than 31,469 views, longer than 45 seconds, English videos were selected on the diagnosis, etiology, and treatment of trigger finger disease.

Video duration, number of views, presentation style, profession of the presenter, number of likes, number of comments, references, treatment content were recorded in an excel file. Videos were scored by two different doctors independently according to JAMA, DISCERN scores and saved in excel. When there were different DISCERN and JAMA counts given to the same video by two physicians, the average of the DISCERN and

JAMA counts was evaluated.

Then, parameters such as the duration, sharing content and visual, and the profession of the informant were grouped. With these parameters, the relationship between video's comments, likes, daily views, DISCERN, and JAMA scores were tried to be determined.

The people who shared were grouped as physiotherapist, chiropractor, doctor (non-field), orthopaedists, plastic surgeon, hand surgeon, patient, coach, physiotherapy doctor, and speaker (profession unknown).

To avoid the divergence between the number of views of the video and the upload date, the daily average views is calculated in accordance with the formula below (12).

(The total number of views determined by the observers during the viewing of the video/ date of viewing the videos by the observers – upload date of the video to YouTube (days))

The video contents were grouped according to whether a surgical option was given in the treatment, whether the given surgical image was animated or real (intraoperative).

Video durations were divided into 9 groups as less than 100 sec, 100 -200 sec, 200 -300 sec, 300 -400 sec, 400 -500 sec, 500 -600 sec, 700 -800 sec, 800 -900 sec, longer. The relationships between video durations and JAMA, DISCERN scores, daily average views, comments, and likes were examined. The effect of the duration of the video on viewer tendencies and information quality was tried to be determined statistically.

Daily average views, comments and likes were used to understand the popularity of the videos. JAMA and DISCERN scores were used to measure the information quality of the videos.

Results

A total of 261 videos viewed were scanned one by one by two doctors. Most of the videos watched were music band, music piece, internet game. These were not included in the study. 71 videos related to the etiology, diagnosis and treatment of trigger finger disease were included in the study.

The mean duration of the 71 videos included in the study is 6 minutes and 23 seconds. The mean number of daily views of the videos is 1262, the mean DISCERN score of the videos is 42.5, the JAMA score is 2.5.

71 videos were presented by people whom we divided into 10 different groups by occupation (Figure 1). 15 of the 71 videos were in the form of animation and 56 of them were real presentations. 20 of 71 videos were told about surgical treatment, 51 of them were not mentioned about surgical treatment. Of the 20 videos that talked about surgical treatment, 8 were animated and 12 were real (intraoperative) images.

14 physiotherapists, 6 chiropractors, 3 doctors (no field), 11 orthopaedists, 4 plastic surgeons, 9 hand surgeons, 6 patients, 2 coaches, 6 physiotherapy doctors and 10 speakers (profession unknown) presented the 71 videos. The mean values of the presenters' DISCERN, JAMA score, daily views, likes and comments were determined (table III).

Interobserver correlation parameters for DISCERN and JAMA scores, Spearman correlation analysis results (r : 0.977, p <0.001, Cronbach α = 0.978) and (r : 0.907, p <0.001, Cronbach α = 0.946) were obtained, respectively. Accordingly, there was great correlation between the two observers.

Likes, comments, daily average views, DISCERN and JAMA scores were compared with the Kruskal Wallis H test in terms of presenter professions. It is presented in (Table IV). The



DISCERN, JAMA scores, likes, comments and average daily viewing numbers of the professions were compared with the Kruskal Wallis H test. According to the results obtained, a significant difference was determined between the profession groups in terms of DISCERN and JAMA scores ($p < .05$). On the other hand, no significant difference was found between the number of likes, comments and average daily viewing ($p > .05$), (Table IV).

Statistical comparisons were used to determine between which presenters groups the difference in DISCERN and JAMA scores were. In the comparison made in terms of DISCERN scores, it was determined that the mean scores of orthopaedists differed significantly from the mean scores of speakers who did not define their profession ($x=14.50$, $p < .05$) and physiotherapists ($x=11.07$, $p < .05$). In terms of JAMA scores, there were significant differences between patients and doctors ($x=-1.50$, $p < .05$), orthopaedists ($x=-1.31$, $p < .05$) and hand surgeons ($x=-1.50$, $p < .05$) (Table IV).

The averages of discern, JAMA, number of likes, comments and average viewing numbers were compared with the Mann Whitney U test, whether there was a surgical option or not. The values obtained are presented in (Table V). According to the findings, a significant difference was found between the videos that gave the option of surgery and those that did not, in terms of distinguishing ($p < .05$, $U=256.00$) and JAMA scores ($p < .05$, $U=323.00$). No significant difference was found between the videos with and without surgery in terms of number of likes, number of comments and average daily viewing times ($p > .05$).

When the videos presenting surgical treatment as an option were evaluated, it was seen that 20 posts were uploaded by 2 doctors (without field), 7 orthopaedists, 2 plastic surgeons, 7 hand surgeons and 2 speakers. Of the 20 Surgical treatment presentation method, 8 were animations and 12 were real (intraoperative) images. Of 12 real (intraoperative) surgical images, 5 were made by a hand surgeon, 3 by an orthopaedist, and 2 by a plastic surgeon, and 2 by a doctor who did not specify the field.

Surgical treatment presentation method and DISCERN, JAMA scores, likes, comments, daily average viewing numbers were compared statistically with Mann Whitney U test and the obtained values are presented in (Table VI). According to the findings, a significant difference was found between the animation and intraoperative presentation of the surgical treatment image in terms of the number of likes ($p < .05$, $U=18.00$). No significant difference was found in terms of DISCERN, JAMA scores, comments and average daily viewing numbers ($p > .05$).

In order to examine the effect of video duration on viewing and information quality, video durations were divided into 10 groups. 5 of the videos are shorter than 100 seconds, 18 of them are 100-200 seconds, 16 of them are 200-300 seconds, 7 of them are 300-400 seconds, 5 of them are 400-500 seconds, 4 of them are 500-600 seconds, 6 of them are 600-700 seconds, 3 some were longer than 700-800 seconds, 3 were longer than 800-900 seconds, and 4 were longer than 900 seconds (Figure 2).

The Kruskal Wallis H test was used to determine whether there was a difference between DISCERN, JAMA scores, likes, comments, average daily views, and the duration of the videos. In the statistical calculation, no significant difference was found between the video durations in terms of DISCERN, JAMA scores, likes, average daily viewing and comment numbers ($p > .05$), (Table VII).

Looking at past health-related videos on YouTube, the

information quality was generally of low quality (13, 14, 15, 16, and 17). The studies carried out covered approximately 25 years. With the work we have done, we have both corrected the deficiency about the quality of YouTube information about trigger finger and updated the information on whether there has been progress in the quality of information on the internet. We determined the effect of animation visual content, surgical visual content and video duration on the audience with statistical analysis. Thus, by sharing our results with doctors, we developed a different perspective to reach more people.

In our study, it was seen that the general information quality of the trigger finger videos was fair (50-39). It is seen that the quality of video information is poor in speakers, fair in coaches, poor in chiropractor, fair in physiotherapists, fair in doctors (no field), good in orthopaedists, fair in plastic surgeons, fair in hand surgeons, and fair in physiotherapy doctors.

Data were discussed to inform patients and physicians. Physicians who wanted to share health-related information on YouTube were advised on presentation styles with higher quality and greater number of impressions.

Discussion

The fact that about half of the 71 videos were presented by doctors (doctors (no field), orthopaedists, plastic surgeons, hand surgeons, physiotherapy doctors) showed the importance doctors place on social media posts. For this reason, a study was conducted on how doctors should present in social media to reach their patients and share information.

There was a statistically significant result ($p < .05$, $U=18.00$) between the number of likes and the surgical treatment videos given with animation. We think that the real intraoperative presentation of the surgical visual of the treatment is not attractive to the audience. Our recommendation for physicians is that if surgical videos are aimed to reach more people, it would be appropriate to enrich the content with animations rather than intraoperative images.

No statistically significant results were obtained between the video duration and the daily average number of views, likes and comments. In other words, we determined that there is no orientation of the viewer depending on whether the video duration is long or short.

Information about surgical treatment was shared in 20 of the 71 videos included in the study. Surgical treatment recommendation was mostly given by doctors (doctors (no field), orthopaedists, plastic surgeons, hand surgeons, physiotherapy doctors).

Being informed about their diseases is one of the fundamental rights of people. People decide on which channel they will access the information. Our task as academics will be to show people on this path a way to reach the right information. The ways of accessing information have shown many differences from past to present. Social media is one of the most widely used methods of accessing information in our time. But the view of social media as a source of information is debatable. On the other hand, it is a fact that the libraries of the future will be in the virtual world.

First of all, the control mechanism regarding the impartiality, reliability and source of the information in the social media is only in the social media providers. But social media providers do not have a control mechanism. However, recently, broadcasting organizations such as social media providers, television and magazines have been criticizing each other. We think that this process will increasingly continue and that social media providers



will have some responsibilities towards the society. In our study, we used various criteria to find the reliability, objectivity and source of information of the sharing. Our task as researchers is to disseminate these metrics and raise awareness. Thanks to this awareness, people will have access to transparent, accurate and reliable information, which is their most natural right.

When we looked at the videos included in the study, one of the biggest problems was the lack of references. Evidence of this was the fact that there were only 2 studies that scored full points in the JAMA score. Likewise, it was seen that the rate of citing references in the videos of physicians was quite low. We believe that giving references should not be seen as a requirement for academic purposes only. Our advice to physicians is that they pay attention to reference in their health-related social media posts.

In conclusion: It has been revealed that health information shared on social media is at a fair level, unlike previous studies. This showed that the level of awareness on social media had increased, but still not at a sufficient level.

We tried to draw a path by making use of parameters such as animation content, video length, surgical visualization that physicians should pay attention to when sharing videos. Such parameters should be multiplied and more studies should be done. We must prepare physicians to reach more people in the next virtual world, to provide more objective, referenced and accurate information.

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