

YouTube is an important resource for hyperhidrosis patients

İlteriş Türk¹  Büşra Özdemir Çiflik²  Kadir Baturhan Çiflik³  Necati Solak⁴ 
Mehmet Çetin² 

- 1 Ankara Atatürk Sanatoryum Training and Research Hospital, Department of Thoracic Surgery, Ankara, Turkey
- 2 Ankara Etlik City Hospital, Department of Thoracic Surgery, Ankara, Turkey
- 3 Ankara Bilkent City Hospital, Department of Thoracic Surgery, Ankara, Turkey
- 4 Dr Nafiz Korez Sincan State Hospital, Department of Thoracic Surgery, Ankara, Turkey

Abstract

Background: YouTube is one of the most used information sources. Hyperhidrosis is a disease that needs treatment mostly due to social complaints.

Methods: Search titles 'Hand sweating, Excessive sweating, Armpit sweating, and Hyperhidrosis' were searched for separately on YouTube. A total of 400 videos, consisting of 100 under each title, were evaluated. Data such as who uploaded the video, which treatment plan it contained, the upload date, country of upload, duration, number of times watched, and rating were recorded. The Video Power index (VPI) was used to evaluate the popularity of the videos in the study.

Results: The number of views, number of likes, and VPI of the video group with a duration of 232 s or more were found to be significantly higher than the video group with a shorter duration ($p=0.001$, $p<0.001$, and $p<0.001$). In commercial videos, the rate of videos featuring non-surgical treatment was found to be the highest at 92.1%. It was found that the videos containing surgical treatment were older than the videos containing non-surgical treatment ($p=0.028$).

Conclusions: The internet is an important source of information in diseases such as hyperhidrosis that cause social dysfunction in young patients and the treatment decision is determined entirely by the level of complaint the patient feels. On the YouTube platform, which is one of these sources of information, it was seen that video-assisted thoracoscopic surgery, which is the definitive and permanent treatment of hyperhidrosis, has started to lose its place to alternative methods in recent years.

Keywords: Hyperhidrosis, Sweating, Symphatectomy, YouTube.

Cite this article as: Türk İ, Çiflik Özdemir B, Çiflik KB, Solak N, Çetin M. YouTube is an important resource for hyperhidrosis patients. Arch Curr Med Res. 2023;4(2):78-82

Corresponding Author:
İlteriş Türk, Ankara Atatürk Sanatoryum Training and Research Hospital,
Department of Thoracic Surgery, Ankara, Turkey
E-Mail: turkilteris@gmail.com



Content of this journal is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

INTRODUCTION

As of March 3rd, 2020, more than half of the world's population has internet access and internet usage has increased, especially with the pandemic period. Of these internet users, it was determined that 81% try to access health-related information over the internet (1). This has led to an increase in the use of the internet by health professionals for the purpose of education and information sharing. In a study in 2020, it was reported that YouTube is the most used social media platform worldwide (2, 3). While easy to upload videos, being free, and the popularity of the platform make YouTube stand out, the unsupervised publishing of videos and the expansion of the domain according to likes and comments are among its disadvantages. (1–3).

Hyperhidrosis is excessive sweating that occurs without an underlying cause or due to secondary causes. While it has been reported that 2% of the world's population has hyperhidrosis, this rate was observed between 2.8%–4.8% in the USA, and it is seen with equal frequency in men and women. The concentration of internet use in the same age range and the determination of the treatment of hyperhidrosis with social indications and patient demand make the internet one of the first application areas for the treatment process of the patients (4,5).

In this study, it was aimed to analyze the videos about hyperhidrosis and evaluate which treatment modalities on the YouTube platform came to the forefront and attracted attention.

MATERIALS AND METHODS

Characteristics of videos

By logging out of personal accounts, the search algorithm does not list videos based on their viewing history. Search titles 'Hand sweating, Excessive sweating, Armpit sweating, and Hyperhidrosis' were searched for separately. Since users do not look beyond

the first 10 pages in 95% of internet searches, the first 100 videos in the list were evaluated for each search word from the videos up to September 1st, 2022 (6). A total of 400 videos were analyzed by 5 surgeons. After excluding videos that were not in the English language, were not compatible with the search words, and 'YouTube Shorts' were excluded from the research, 268 videos were evaluated. Ethics committee approval is not required. This study was conducted with public access information from YouTube.

Assessment of quality of videos

Data such as who uploaded the videos (health professional, patient experience, advertisement, health organization), which treatment plan it contained (surgery, non-surgical options, anti-treatment, all), the upload date, country of upload, duration, number of times watched and rating were recorded. Since the popularity of YouTube videos within the platform increases with the number of comments, likes and views rather than the value of the content, the video power index (VPI; like rate \times view rate/100) was used to evaluate the popularity of the videos in the study (3,7).

Statistical Analysis

The IBM SPSS Statistics Standard Concurrent User V 26 (IBM Corp., Armonk, NY, USA) computer package program was used for statistical analysis of the research data. Descriptive statistics were given as the number of units (n) and percentage (%). $p < 0.05$ was considered statistically significant.

RESULTS

Data on who uploaded the videos, which treatment method was prominent in the content, and the country where the video was uploaded are given in Table 1. The time elapsed from the upload of the videos to September 1st, 2022, the duration of the videos, the number of views and likes, and the median and average VPI values are shown in Table 2.

Table 1. Characteristics of videos

		Number of videos	%
Uploader	Healthcare Professional	104	38.8
	Patient Experience	62	23.1
	Health Organization	55	20.5
	Advertisement	45	16.8
	Other	2	0.8
Treatment Option	Botox	95	35.5
	Surgical Treatment	49	18.3
	Iontophoresis	28	10.4
	Botox + Iontophoresis	23	8.6
	Microwave	22	8.2
	All (Surgical+non-surgical)	20	7.4
	Topical Treatments	14	5.3
	Other treatments	12	4.5
	Anti-treatment	5	1.8
Source Country	USA	153	57.1
	India	31	11.6
	United Kingdom	22	8.2
	Australia	13	4.9
	Canada	10	3.7
	Other	39	14.5

Table 2. Numerical values for videos

	Mean(\pm std deviation)	Median (min-max)
Upload date (month)	51.46 (\pm 39.20)	36 (1-168)
Video duration (seconds)	337.59 (\pm 340.30)	232 (28-1940)
Views	78069.07 (\pm 255280.09)	13696.50 (6-3553277)
Number of likes	1110.53 (\pm 3954.93)	102.50 (0-44000)
Video Power Index	8.16 (\pm 102.70)	0.94 (0.17-223527)

When the video durations were compared, no significant difference was found in the video durations between the groups ($p=0.744$). Two groups were formed over the video durations according to the median value. The number of views, the number of likes, and the VPI of the video group with a duration of 232 s or more were found to be

significantly higher than the video group with a shorter duration ($p=0.001$, $p<0.001$, and $p<0.001$ respectively) (Table 3). When the relationship between the content of the 268 uploaded videos and the VPI was evaluated, no statistically significant difference was found between the groups ($p=0.312$).

Table 3. Statistical comparisons between groups

	n	Median	Min-max	z	p
Treatment option					
Surgical	49	188.00	42.00-1826.00		0.744
Non-surgical	194	239.50	28.00-1940.00		
All	20	239.50	82.00-1422.00		
Anti-treatment	5	344.00	173.00-648.00		
Views					
<232 seconds	134	5249.50	6.00-518811.00	-3.241	0.001
>232 seconds	134	22412.50	33.00-3553277.00		
Number of likes					
<232 seconds	134	39.50	0.00-32066.00	-4.379	<0.001
>232 seconds	134	298.00	0.00-44000.00		
Video Power Index					
<232 seconds	134	0.66	0.00-1679.23	-5.651	<0.001
>232 seconds	134	1.36	0.00-12.45		

In commercial videos, the rate of videos featuring non-surgical treatment was found to be the highest at 92.1%. It was found that the videos containing surgical treatment were older than the videos containing non-surgical treatment ($p=0.028$) (Table 4).

Table 4. Comparison of surgical and non-surgical videos by upload date

Treatment option	Number (n)	Upload date		t	p
		Mean	Standard deviation		
Surgical	49	64.24	47.19	2.243	0.028
Non-surgical	194	48.06	35.93		

The video content and who uploaded the video did not make a statistically significant difference on the number of video views ($p=0.200$ and $p=0.800$ respectively).

DISCUSSION

Hyperhidrosis is a common and locally seen pathology. Treatment seeking is usually seen in local hyperhidrosis. Local hyperhidrosis can be seen in one or more of different places, such as the hands, armpits, feet and face. Treatment options differ in the branches of plastic surgery, dermatology, and thoracic surgery. While there may be local and temporary treatments, such as Botox, treatment plans can be drawn with recently popular cosmetic procedures (8). In addition, the permanent and definitive treatment is surgical sympathectomy (9).

The fact that different branches offer treatment options, the patients' need for treatment for social reasons, the prevalence of internet use in young patients, and the lack of a treatment algorithm bring uncertainty in the evaluation of the treatment option. All of the treatment options have certain advantages and complications. In particular, the internet platform can play an important role in the patient's decision on the treatment option (10).

The fact that the number of views, likes and VPI values of long-term (>232 s) videos were statistically significantly higher than short-term videos (<232 s), suggests that a person doing research on a medical subject on the internet is due to the desire to reach more information. As stated in the studies in the literature, the correct medical

information obtained from the internet contributes to many areas, from directing the patients to the diagnosis and treatment process, to increasing the quality of care of the patient during the treatment to its positive effect on the health economy. Although there is a platform with many surgical training videos, YouTube is the preferred first place. This may also contribute positively to medical education (2,3). It is our belief that increasing the number of videos supporting the surgical treatment of hyperhidrosis without time limitation is therefore important in accessing the right information and providing the correct guidance of the patients on the way to treatment.

The convenience provided by the YouTube platform in uploading and disseminating videos provides convenience for the advertisement of the services offered to patients in the health sector (3). It has been reported in studies that endoscopic thoracic sympathectomy (ETS) is the best option, especially in the treatment of palmar and axillary hyperhidrosis, against non-surgical alternative treatments that need to be repeated continuously (11,12). It is our belief that the reason for the high number of videos in which non-surgical treatments were recommended in the videos that were considered as advertising videos is because the materials used in the treatment are presented as an alternative to the surgical option, which is the definitive treatment, and more-strong advertising is needed. The fact that non-surgical treatment videos were significantly more recent can be interpreted as concrete evidence that thoracic surgeons should pay more and more attention to information sharing on YouTube for the substantial number of patients accessing medical information online.

The fact that the number of views and likes was independent of the uploader or the content of the video is also valuable in that it shows that producing more surgical content can be parallel to more information about surgical treatment. Considering the existence of studies in the literature in which ETS gives excellent results, especially in palmar and axillo-palmar hyperhidrosis, and no recurrence has been reported, it is proof that watching videos more or less and having a high number of likes do not always indicate correct information (4,12). No statistically significant difference was observed in the comparison of VPI values for the contents. This also supported our thinking.

The value of the study is that it is one of the rare studies in which the guidance of the YouTube platform was

evaluated in a disease that is treated with social indications and treatment alternatives include different branches. The main limitation of our study is that the widely used scoring is no longer valid because the Youtube platform has removed the dislike number from all videos. For this reason, another and relatively weak scoring system evaluated in the literature was used.

In conclusion, the internet is an important source of information in diseases such as hyperhidrosis that cause social dysfunction in young patients and the treatment decision is determined entirely by the level of complaint the patient feels. On the YouTube platform, which is one of these sources of information, it was seen that surgery, which is the definitive and permanent treatment of hyperhidrosis, has started to lose its place to alternative methods in recent years.

Declarations

The authors have received no financial support for the research and/or authorship of this article. There is no conflict of interest.

Ethics committee approval is not required. This study was conducted with public access information from YouTube.

REFERENCES

- Rodriguez Rodriguez AM, Blanco-Díaz M, Lopez Diaz P, de la Fuente Costa M, Dueñas L et al. Analysis of YouTube videos presenting shoulder exercises after breast cancer surgery *Breast Care (Basel)*. 2022;17(2):188-198
- Almarghoub MA, Alghareeb MA, Alhammad AK, Alotaibi HF, Kattan AE. Plastic surgery on YouTube *Plast Reconstr Surg Glob Open*. 2020;8(1):e2586
- Balta C, Kuzucuoglu M, Can Karacaoglu I. Evaluation of YouTube videos in video-assisted thoracoscopic pulmonary lobectomy education *J Laparoendosc Adv Surg Tech A*. 2020;30(11):1223-1230
- McConaghy JR, Fosselman D. Hyperhidrosis: Management options *Am Fam Physician*. 2018;97(11):729-734
- Nawrocki S, Cha J. The etiology, diagnosis, and management of hyperhidrosis: A comprehensive review: Therapeutic options. *J Am Acad Dermatol*. 2019;81(3):669-680
- Yılmaz MF, Kalkan S. YouTube as a source of information on 'Manual blood pressure measurement' *Koşuyolu Heart J* 2022;25(1):102-107
- Erdem MN, Karaca S. Evaluating the accuracy and quality of the information in kyphosis videos shared on YouTube. *Spine (Phila Pa 1976)*. 2018;43(22):E1334-E1339
- Henning MAS, Bouazzi D, Jemec GBE. Treatment of Hyperhidrosis: An Update. *Am J Clin Dermatol*. 2022;23(5):635-646.
- Felisberto G Jr, Maria Cataneo AJ, Cristina Cataneo D. Thoracic sympathectomy for the treatment of primary axillary hyperhidrosis: systematic review and proportional meta-analysis. *Ann Med*. 2021 Dec;53(1):1216-1226.
- Batur AF, Altintas E, Gül M. Evaluation of YouTube videos on primary bladder pain syndrome. *Int Urogynecol J*. 2022 May;33(5):1251-1258.
- Aubignat M. Hyperhidrose : du diagnostic à la prise en charge [Hyperhidrosis from diagnosis to management]. *Rev Med Interne*. 2021 May;42(5):338-345. French
- Cerfolio RJ, De Campos JR, Bryant AS, Connery CP, Miller DL, DeCamp MM, McKenna RJ, Krasna MJ. The Society of Thoracic Surgeons expert consensus for the surgical treatment of hyperhidrosis. *Ann Thorac Surg*. 2011 May;91(5):1642-8