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Quality of Information in YouTube Videos on Penis Enlargement Surgery

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ABSTRACT

Background: An increasing number of patients and their aesthetic curiosity are causing the online questioning of penis enlargement surgery (PES). Although there is a wealth of healthcare information about PES on the internet, the quality of PES-related information on YouTube, the most visited online video streaming service, has not fully known. It is aimed to evaluate the quality of information about PES in YouTube videos.

Materials and Methods: In January 2021, we cross-sectionally performed YouTube search using the keywords "penis enlargement surgery", "penis lengthening surgery", or "penis thickening surgery". We sorted the videos as reliability in terms of containing scientifically proven information by 1 urologist and 1 plastic surgeon. Irrelevant, non-Turkish, and silent videos were not included. Video demographics were analyzed based on the quality and source of the video. A 5-point global quality scale, a 5-point reliability (DISCERN) tool, kappa statistic, the intraclass correlation coefficient, and descriptive statistics in the form of proportions and percentages were used.

Results: A total of one-hundred PES videos published on YouTube between 2015-2021 were searched. Thirty-nine of these videos were removed due to duplicate, irrelevant, lack of sound or misleading information. Deceptive videos had a significantly higher number of likes than useful videos. On the other hand, useful videos had significantly more views than misleading videos. Useful videos had a higher DISCERN score compared to misleading videos. The fact that the uploader was sourced by professionals and doctors working at universities significantly contributed to the usefulness of the videos.

Conclusion: As searching for information about PES on YouTube, patients are exposed to low-quality and confusing videos. Complexity in the number of views and likes could make accessing the informative PES video difficult. It may be recommended that patients prefer PES videos created by professionals.

Keywords

YouTube, Internet, Penis enlargement surgery, plastic surgery, video quality.

Abbreviation

PES: Penis Enlargement Surgery; GQS: Global Quality Scale; DISCERN: 5-point Reliability Quality Criteria for Consumer Health Information; COVID-19: Coronavirus 2019.

Background

The penis is considered a dominant symbol in men, and penis length and girth raise significant concerns in men [1]. Although the average erect penis length is around 13 cm, men who perceive their penis as smaller than the average constitute 91% of the general population [2]. This perception leads men to seek new clinical intervention.

Prejudice about penis sizes is further spread by media. There are "information" videos on them, especially on platforms such as YouTube. Thus, men are increasingly seeking medical solutions for “inadequate” size [3]. Besides this type of motivation, there are also men who have small penises. Although there are numerous indications and strategies for penis enlargement, only limited material is available for clinical recommendations for penile enlargement. Current literature is also insufficient in this regard.

Social and cultural beliefs that may indicate that penis size is important may lead men to fear negative evaluation when exposed to sexual situations that lead to impaired sexual function. Preoccupation with penis size is predominant in the male population and is also a cornerstone of many cultures [4]. While many young men are seemingly self-confident about penis size, most are concerned about actual penis size and its relation to the norm. In this respect, men want to receive information about enlargement operations.

Penis enlargement surgery (PES) distinguishes between procedures that increase penile circumference and penile length, and plastic procedures to replace the skin surrounding the penis [5]. Men who eager to have this operation want to get information from clinicians before making an appointment and do a search from webpages, social media, and video-publishing sites.

Today, usage of online social media as a communication channel in social interaction is popular. The flow of information in social media is increasing exponentially [6]. An inevitable consequence of this is the use of channels such as YouTube for also medical information. YouTube is a platform frequently used by hospitals and healthcare organizations to disseminate health information [7]. In addition, it is also used by people who want to receive service from the hospital. The quality of medical information in YouTube videos, including videos about the penis concerns, has been examined by a study [8]. However, there is currently no research on the quality of PES videos on YouTube.

In this study, we aimed to evaluate the quality in terms of content and reliability by criticizing the YouTube videos on the PES.

Methods

Search and Data Collection

The keywords “penis enlargement surgery”, "penis lengthening surgery", or "penis thickening surgery" were searched on YouTube. Irrelevant (not including PES information even the keywords catch), non-Turkish and muted videos were discarded. The convenient videos were sorted as reliability in terms of including scientifically proven information by one urologist and one plastic surgeon. PES videos (n=100) published on YouTube between 2015-2021 were found. Due to irrelevant conditions such as duplication, lack of sound or misleading information, thirty-nine videos were discarded from the analysis.

Video Parameters and Scoring System

Count of views, number of likes/dislikes, publishing date, and the video length were collected from the videos. Publishing date was recorded for analyzing the video rates as views per day. Video demographics were analyzed based on the quality and source of the video. A 5-point global quality scale (GQS), 5-point reliability quality criteria for consumer health information (DISCERN) tool, kappa statistic, the intraclass correlation coefficient, and descriptive statistics in the form of proportions and percentages were used.

The GQS is a scoring defined by Bernard et al that is used to evaluate the educational effectiveness of video for patients. According to the answer, the point value of the next number is given [9]. In addition, DISCERN is a scoring system that questions the reliability of the publication and the quality of the information about the treatment options available to the patient. It was defined by the University of Oxford. The questions are answered yes, partially, and no, and a score of 1-5 is given. It contains 16 questions. A score of 64-80 indicates that the criteria are fully met, a score of 32-64 indicates that it is partially fulfilled, and a score of 16-32 indicates that the quality criteria are not met at all [10]. VPI is calculated with the formula Like Rate x View rate / 100 created by Erdem MN et al. This formula defines and evaluates the popularity of the video [11].

Statistical Analysis

SPSS 25.0 (IBM, NY, USA) was used for statistical analysis. The normality of the distribution was checked with the Kolmogorov-Smirnov test. Independent sample t test and Mann Whitney U test were used. Statistically significant p value was determined as <0.05.

Results

61 videos were included in the study. Of these, 59 contained useful information, while 2 were misleading. The publication years of the videos were between March 2015 and December 2020. According to the speaker who made a statement in the videos, it was determined that the speaker was a physician in 59 of the videos. Of the physician speakers, 30 were plastic surgeons and 28 were urologists. Male physicians were preferred in all the physician speakers (Supporting file).

The average length of the videos is 497.13 ± 1031.97 seconds. The total number of views of the videos was determined as 152209.10 ± 422114.16. The average number of likes is 437.37 ± 1416.80. The number of dislikes was 73.69 ± 203.82 in total. The number of views and likes of useful videos are less than those that are useless (Table 1).

The average DISCERN score of useful videos was significantly higher than the useless ones (p=0.022). There was no significant difference in GQS scores between the two groups. Most of the videos were published by universities/professional organizations/ non-profit physician/physician groups (Table 2).

Table 1: Evaluation of YouTube Videos in terms of the characteristics.

Characteristics	Useful video (N=59)	Misleading video (N=2)	Total (N=61)	p
Video length	500.36 ± 1000.56	259.00 ± 90.51	497.13 ± 1031.97	0.750
Total views	115269.14 ± 364009.90	893017.50 ± 1229899.82	152209.10 ± 422114.16	0.008*
Likes	354.17 ± 1325.52	2410.50 ± 3379.56	437.37 ± 1416.80	0.043*
Dislikes	63.34 ± 198.34	253.00 ± 343.65	73.69 ± 203.82	0.196

Table 2: Analysis of useful and misleading videos in terms of the power-index.

Video power-index	Useful video (N=59)	Misleading video (N=2)	p
DISCERN Score	47.46 ± 14.28	23.50 ± 4.95	<0.022*
GQS score	2.93 ± 0.74	2.50 ± 0.71	<0.419
Source of upload, *n (%)*			<0.001*
Universities/professional organizations/non-profit physician/physician groups	55 (93.22%)	1 (50%)	
Stand-alone health information websites	2 (3.39%)	0	
Medical advertisement/for profit companies	2 (3.39%)	1 (50%)	
Individual	0	0	

Discussion

In this study, the viewing values of PES videos on YouTube were evaluated in terms of quality. After the evaluation, it has been indicated that the videos uploaded to YouTube by professionals and doctors are of higher quality compared to other PES videos. This shows that PES videos on YouTube can be useful and other surgery videos can also be used by physicians depending on their upload status.

The exclusion criteria for the evaluation of PES-related videos in the study were clearly defined in terms of non-Turkish language or other misleading problems. The reason for this is to be able to make a strong quality assessment. This research on the YouTube criticized that patient frequently visit this web-page in various other health researches. In one of the similar studies, YouTube videos were evaluated as an educational tool on male urethral catheterization. It has been reported that the quality of the videos is highly variable in the evaluation [15]. For this reason, the videos can only be considered useful unless selection by the doctors and recommended to the relevant patients. Accordingly, YouTube is also used as a source of information about the treatment of premature ejaculation, and as a result, the web page is a reliable and important data source for this disease [12]. Another study analyzed the reliability of YouTube videos as a source of information about Peyronie's disease treatment. It is recommended to be informed that videos containing misinformation are more popular and non-profits should not immediately believe videos containing medical advertisements without consulting doctors [8]. This information suggests that the reliability of YouTube videos with urinary system related diseases may be problematic.

It is known that patients prefer to check YouTube videos in other health-related situations. The reliability of these videos is also a matter of debate. YouTube channels has been examined as a source of medical information about the current issue of the coronavirus-19 pandemic. According to the results, although it is one of the respected sources for reducing the spread of the disease and reducing unnecessary panic in the general population, there are still large gaps in understanding worldwide [13]. In contrast, YouTube videos were argued to be a source of misinformation in other diseases such as pulmonary fibrosis. According to the data, videos supporting the use of treatments not recommended by physicians were seen to have a higher number of views [14,15]. Likewise, research has shown that information on the surgical treatment of benign prostatic hyperplasia on YouTube is highly biased and misleading. It has been suggested that most of the videos on YouTube have low quality content, provide false information, and are subject to commercial bias [16]. This illustrates the potential risks of using YouTube as a reliable source for health information. Thus, patients can be informed by performing information reliability analyzes on YouTube for each disease.

In our study, we evaluated the national PES videos. Analysis of national health videos posted on YouTube has shown conflicting results in research. For example, the reliability of national videos about kidney stones were prepared by professional individuals/organizations on the internet in a way that will attract attention and be easily understood by the public can contribute to the knowledge and education of our society about stone disease [17]. YouTube videos on the relationship between pregnancy and COVID-19 showed having high viewing rates, but are generally low in quality and reliability [18]. Turkish content on YouTube was evaluated during the COVID-19 pandemic. Since there is no refereeing system, people can publish all kinds of videos and the content of the videos published through channels may include incorrect statements. Despite this, it has been argued that in extraordinary situations such as pandemics, videos of official health authorities and international organizations should be more visible on YouTube [19]. The reliability of Turkish "Basic Life Support" and "Cardiac Massage" videos uploaded to YouTube was investigated and was determined that Turkish videos on these subjects were not reliable [20]. All this information shows that national videos about health published on YouTube may cause information distortion. Therefore, publishers may be preferred as professional clinicians. Otherwise, information distortion can mislead patients and lead to hazardous results. The videos published on a very powerful platform such as YouTube about each disease could be analyzed by the relevant experts and the patients should be informed.

Conclusion

In conclusion, the analyzes in this study suggest that PES videos on YouTube can be confusing except the videos published by clinicians. Both the number of views and the number of likes/dislikes draw attention as misleading parameters in PES videos.

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