

Review article

Measuring the quality of YouTube videos on anxiety: a study using the global quality scale and discern tool

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ABSTRACT

Anxiety is a persistent feeling of fear. The onset usually starts in childhood and can have adverse effects in adolescence. In the past, the public used to seek medical advice from professionals. In the modern era, free video-sharing platforms like YouTube have gained popularity among the masses. It has been observed that the public consults medical information from these videos. Therefore, it has become necessary for medical experts to assess the quality of these videos and prevent misinformation. On 15 August 2022, a YouTube search was done on treating and managing anxiety. 75 videos were selected according to inclusion criteria. The videos were divided into two categories: useful and misleading. The global quality scale (GQS) and DISCERN tool were used to review and assess these videos independently. Out of 169 videos analyzed, 137 had useful information and 32 had misleading information content. Useful content videos had a higher number of DISCERN and GQS than misleading content videos. The analysis showed that physician-based 51 videos have useful information. It was also observed that useful videos had more likes and views. Therefore, medical professionals should be encouraged to make medical education and awareness videos because physician-based videos seem to have the highest credibility and popularity among the general public.

Keywords: Anxiety, YouTube, Medical information, Misinformation, Mental health

INTRODUCTION

Anxiety is the feeling of fear that transpires when faced with threatening or stressful circumstances. It is a normal response when challenged with danger but if the feeling persists, it could be regarded as an anxiety disorder.¹ Anxiety disorders occur very commonly and may harm the quality of people's lives. It usually begins typically in childhood and can have some serious and long-lasting consequences.² When researching the lifetime prevalence of anxiety disorders in adolescents, it was reported to be as

high as 32%.³ YouTube was originally launched in 2005 with a focus to become an internet-based hub where user-generated content could be shared and has become the dominant and giant platform for online videos worldwide. It is also an important location for the most significant trends, with a total of more than one billion distinctive visitors monthly.⁴⁻⁶ YouTube has a vast community user base that allows people to view, share, upload, and download content free of cost, moreover, they can communicate with other users and comment on videos of other users.⁷ The Internet and YouTube are now some of

the most popular sources of information related to health and its queries. YouTube offers a variety of videos to which practitioners, patients, and their families have access to information and can educate themselves about a particular health issue or disease, thus it helps the public in understanding health behaviors and serves as a useful data source.^{8,9}

A report by the American College Health Association was published in 2018 according to which 63% of college students in the United States felt immense anxiety during the last 12 months, moreover, professional mental healthcare providers either diagnosed or treated 23% of these students for anxiety disorders.¹⁰ Meanwhile, in recent times, how young people interact with online platforms such as YouTube has undergone drastic shifts. Present methods for diagnosis of anxiety issues rely on in-person interviews, which can be time-consuming, and expensive, therefore teenagers and young people are engaging with YouTube for health-related issues as anxiety management itself.¹¹

In the past, many people sought medical advice from a medical professional; however, due to the development of the internet and YouTube teenagers are now using online resources to access medical information regarding their ailment. As more and more medical professionals see the value of YouTube as a source of public health information, the number of studies examining the quality of information available on YouTube is growing very rapidly.¹²⁻¹⁵ However, consulting YouTube for medical information comes with some disadvantages too which include a lack of peer review, disorganization, and complex medical language.¹⁶

Therefore, it is indispensable to assess the quality of the information shared on such platforms. To our knowledge, no prior studies have examined the quality of videos on the management and treatment of anxiety. Therefore, this study aims to assess the usefulness and accuracy of the medical information in videos available on YouTube for management and its treatment for anxiety which will help to improve the professionalism of the video available on YouTube.

METHODS

On 15 August 2022, a YouTube search was conducted using the keywords "anxiety treatment," "anxiety management," "anxiety therapy," "anxiety cure," and "anxiety solution." For each keyword, 75 videos were reviewed, presuming that the viewer would only check the top five pages of search results. The videos were arranged by relevance, as is YouTube default. Only videos in English were included, as English is the universal language. Duplicate videos, non-English videos, videos without audio and/or visual information, videos exceeding 1 hour in duration, and live-stream videos were excluded. The videos were analyzed separately by three reviewers. Any differences among the reviewers were resolved by

reassessment. Each video was analyzed for the presence of information on COVID-19, the effects of the pandemic on mental health, and dealing with mental health during a pandemic.

The researchers did a comprehensive assessment of the videos to determine if they were useful or misleading. The video was categorized as useful if it included valuable information about the relationship between COVID-19 and mental health and did not contain misleading information. The video was categorized as misleading if it contained incorrect data in terms of the above-mentioned criteria (for example, one video referred to COVID-19 as a man-made conspiracy).

The overall quality of all selected videos was assessed using GQS. GQS was a 5 Point Likert scale based on the quality of information, the flow, and the convenience of use of the information available online, as stated in Table 1. A video with a GQS score of 4 or 5 points is regarded as high quality, while a video with a score of 3 points is considered intermediate, and a video with a score of 1 or 2 points is considered low quality.

Table 1: Global quality scale criteria.

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

Researchers assessed the reliability of the YouTube videos using the five-point DISCERN tool, which has previously been used as a measurement instrument for internet sources in similar studies. This assessment tool consists of five yes–no questions with a point value ranging from 0 to 5 (Table 2).

Statistical analysis

IBM statistical package for the social sciences (SPSS) Statistics 26 was used for the analysis. For categorical variables, the Chi-square test and Fischer exact test have been performed. Continuous variables are represented as Mean, standard deviation, minimum and maximum. A p value of less than 0.05 is considered significant.

Table 2: Modified DISCERN tool.

S. no.	Modified DISCERN tool	Yes	No
1	Are the aims clear and achieved?		
2	Are the sources of information reliable?		
3	Is the information balanced and unbiased?		
4	Are additional resources to information provided?		
5	Does the video address areas of controversy/uncertainty?		

RESULTS

Table 3 displays the mean numbers, standard deviations, minimum and maximum numbers of views, likes, duration (minute), days since upload, interaction index, and comments. The videos were watched a total of 577537.81 times. The most viewed video included 32048387 views and was uploaded by a physician, whereas the least viewed one included 25 views. With 349000 likes and 18000 dislikes, the most liked video was also the most viewed one. Furthermore, videos were “liked” more often than “disliked” (mean number of “likes” 12173.03 vs. mean number of “dislikes” 338.35).

A comparison of video parameters between useful and misleading information content videos was given in Table 4. Out of 169 videos analyzed, 137 had useful and 32 had misleading information content. Useful content videos had a higher number of DISCERN and GQS than misleading content videos.

Table 3: Descriptive data of the YouTube videos about anxiety disorders.

Parameters	Mean	Standard deviation	Maximum	Minimum
Number of views	577537.81	2605925.03	32048387	25
Number of likes	12173.03	37727.78	349000	0
Number of dislikes	338.35	1473.67	18000	0
Duration (minutes)	11.36	10.64	59.90	1.13
Days since upload	1100.43	828.32	3797	36
Interaction index	2.38	1.78	16.00	-0.18
Number of comments	1371.27	3373.84	22143	0

Table 4: Comparison of video parameters between useful and misleading information content videos.

Parameters	Useful information (n=137)		Misleading information (n=32)		P value
	Mean	Standard deviation	Mean	Standard deviation	
Views	573047.77	2824316.67	596760.78	1344132.16	0.963
Likes	11048.75	35620.41	17032.81	46109.09	0.428
Dislikes	314.17	1574.39	442.84	932.27	0.663
Duration	11.30	10.73	11.59	10.44	0.890
Views per day	668.61	1951.93	579.39	1446.82	0.808
Index	2.34	1.49	2.57	2.76	0.523
Comments	1414.91	3494.23	1186.84	2852.27	0.736
DISCERN	3.02	0.78	1.72	0.46	0.000*
GQS	3.34	0.80	1.88	0.42	0.000*

GQS=Global quality score, *significant.

Figure 1 displays the percentage distributions of the videos according to their sources. Most of the videos were uploaded by a physician (37%), a medical (20%), or non-physicians (17%). A comparison of useful and misleading information content videos which contain a slideshow presentation was presented in Table 5.

The major amount of useful information has physician content, followed by medical, non-physician, educational, and patient videos, in descending order. Also, a comparison of video speakers between useful and misleading information content videos was presented in Table 6. Most of the useful information has been spoken by a doctor, followed by an external voice, non-physician, and patient, in descending order.

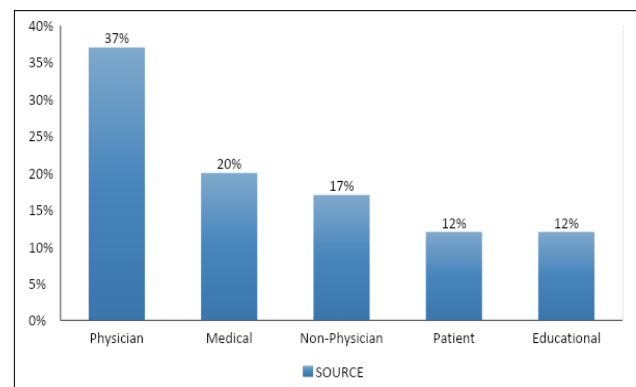
**Figure 1: The percentage distributions of the videos according to the video source.**

Table 5: Comparison of slideshow presentation videos between useful and misleading information content videos.

Source	Useful information	Misleading information	P value
Medical	30	7	0.741
Physician	51	10	
Non-physician	21	7	
Patient	16	4	
Educational	18	2	

Table 6: Comparison of videos speakers between useful and misleading information content videos.

Speaker	Useful information	Misleading information	P value
Doctor	52	11	0.989
Patient	18	4	
External voice	40	10	
Non-physician	27	6	

DISCUSSION

YouTube™ can be used to provide a wide range of medical data, which is being delivered to people who seek quick and free responses to their health problems. Also, this content can be used by health care providers, professionals, or others to inform people as well as increase their professional/name recognition. This study presents that YouTube videos reviewed in this sample can be used to reduce anxiety, particularly those uploaded by doctors. On the other hand, this research paper provides many insights on the characteristics of reducing anxiety-related information available on YouTube including: YouTube includes anxiety-solving methods, which are being viewed by patients; this content provides much different information, including misleading and useful information, which can be uploaded by various speakers with different backgrounds; the majority of this information is useful, but there is still a probability of healthcare consumers to encounter misleading information during the information-seeking process; the major amount of useful information has a physician content, followed by a medical, non-physician, educational and patient videos, in descending order; and most of the useful information has been spoken by a doctor, followed by an external voice, non-physician, and patient, in descending order.

Furthermore, anxiety disorders are considered to be one of the most common mental disorders, starting early in life and following a chronic course.¹ Anxiety disorders are often associated with substantial impairment and use of primary care services, but data requires decision-making in public health policy and service planning.¹

However, even though YouTube is constituting a main source for patients, who are turning to the Internet to better understand their medical conditions and treatments, many

safety concerns could appear when consumers use information obtained from YouTube for healthcare decision-making.² Thus, we aimed to assess the quality and content of the videos about anxiety disorders treatment on YouTube. The findings of our study showed that YouTube contains videos of different quality and content as well as that YouTube users showed great interest in videos related to the treatment of anxiety disorders, the view numbers of these videos were quite high, and the audience who commented on videos to show their interests and experiences. On the other hand, patients may find it hard to follow these videos in their health status.³ Also, even if the information content videos are accurate, patients may not always interpret this information correctly, and 40% of the patients are preferring to be guided to convenient websites by their doctors.³

Nevertheless, based on our study, the videos with good information content about anxiety disorders had a higher number of views than videos with misleading information content, and videos containing the personal experiences of patients have a lower educational value than that of experts.

Moreover, if healthcare professionals and organizations actively participate on YouTube, it can become a powerful information dissemination platform, including anxiety disorders treatment.²

CONCLUSION

The study assessed the quality and accuracy of 75 YouTube videos on anxiety management and treatment using the GWS and DISCERN tool. The analysis found that physician-based videos were more likely to provide useful and reliable information and highlight the importance of medical professionals creating accurate content for the public. However, caution should be exercised when using YouTube or any online resource as a source of medical information, and consulting with a healthcare professional is recommended. Further research is needed to understand the factors that contribute to the credibility and popularity of YouTube videos on health-related topics. Overall, this study adds to the growing research on the use of YouTube for health-related information and emphasizes the need for reliable and accurate content. It suggests that medical professionals can play a valuable role in creating high-quality content for the public on anxiety management and treatment.

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