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Evaluation of Alcohol Use Disorder Videos on YouTube: A retrospective Analysis

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Abstract

Objective: Alcohol-related health problems, including emergency admissions, are a significant concern globally. With the rise of internet usage, platforms like YouTube have become key sources of information on alcohol use disorder. This study aimed to evaluate the quality and content of English-language YouTube videos related to alcohol use disorder, utilizing criteria such as the Modified DISCERN scale, Global Quality Scale (GQS), and DSM-5 guidelines.

Methods: Of the 926 videos initially identified, 506 were included for analysis.

Results: Results revealed that while YouTube serves as a valuable educational resource for alcohol-related information, concerns exist regarding the accuracy and reliability of content, with a notable lack of videos uploaded by official institutions. Furthermore, despite the varying quality of videos, no statistically significant difference was observed based on the source of upload.

Conclusion: The findings highlight the need for improved algorithms to promote reliable content and greater involvement of official institutions in disseminating accurate information. Educational videos, especially those targeting emergency department patients, have the potential to enhance knowledge and facilitate informed decision-making regarding alcohol-related health issues. However, further research is warranted to assess the effectiveness of such interventions in reducing alcohol-related emergencies and burden on healthcare systems. Addressing these challenges could lead to more effective strategies for mitigating the harmful effects of alcohol misuse on public health.

Keyword: DSM-5, midified DISCERN, alkol use disorder, social media, emergency medicine, public health

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INTRODUCTION

Admissions to emergency departments due to alcohol poisoning or other alcohol-related health problems are relatively common (1). These conditions may require rapid and effective medical intervention. It's noteworthy that these applications may occur more frequently in societies where alcohol consumption is widespread. For instance, in Germany alone, approximately 100,000 patients are admitted to hospitals every year due to alcohol and alcohol-related health problems (2). This highlights the significant burden alcohol-related issues impose on healthcare systems worldwide.

Moreover, alcohol use and abuse are associated with approximately 60 different types of diseases and injuries (3). Shockingly, alcohol use ranks among the leading causes of death among individuals aged 12 to 20, particularly due to injuries, homicide, and suicide (4). These statistics underscore the urgent need for effective strategies to address alcohol-related harm, especially among vulnerable age groups.

Furthermore, alcohol addiction, also known as alcohol use disorder, is a prevalent issue with global implications. Alcohol addiction is a condition wherein a person consumes alcohol uncontrollably and involuntarily. This uncontrollable behavior can lead to harmful physical and psychological effects, significantly impacting an individual's daily life (5). Many individuals seek information and support through various online platforms, such as YouTube.

According to the DSM-5 (Diagnostic and Statistical Manual for Mental Disorders, 5th Edition), alcohol use disorder is defined as a disorder of alcohol consumption based on certain criteria. These criteria include symptoms such as loss of control over alcohol consumption, a strong desire to drink alcohol, an irresistible desire during alcohol consumption, and feelings of guilt or regret after alcohol consumption (6). Unlike the previous version of the DSM-4-TR, which distinguished between alcohol dependence and alcohol abuse, alcohol use disorder, as defined in the DSM-5 under the heading "Alcohol-Related Disorders," evaluates both conditions under the category of "Alcohol Use Disorder." This diagnosis is based on the presence of certain symptoms and is classified as mild, moderate, or severe according to the number of symptoms.

Video sharing platforms such as YouTube have become a popular source of access to information today. While YouTube reaches millions of users with its content in various fields, the importance of the Internet in accessing health information is gradually increasing. Research shows that the vast majority of Internet users access health-related information via the Internet. Recent research shows that 8 out of 10 Internet users access their health information via the internet (7). However, the quality and accuracy of the information provided in these videos can vary greatly, leading to potential consequences for those seeking help.

In particular, the increase in content production on platforms such as YouTube and the lack of supervision mechanisms raise concerns among health care providers and government agencies about the accuracy and quality of health-related content Decently. Alcohol use disorder is especially common in young adults (8). The use of social media is again common in this age group. Video sharing sites such as YouTube are one of the Decently used media for alcohol consumption among young people and information sharing in this field. In this context, it is important to evaluate the alcohol use disorder content found on YouTube Health service providers and government agencies express concerns about the accuracy and quality of the information available on this platform. The source of the concerns is mainly based on two reasons. The first is the increase in the use of YouTube by content uploaders, especially for sharing personal and observational information; secondly and more importantly, there are minimal guidelines and interventions for controlling and regulating the content of the material uploaded to the site (9).

Misinformation concerning alcohol use disorder in YouTube videos is widespread, potentially leading individuals to adopt erroneous advice or beliefs. The Substance Abuse and Mental Health Services Administration emphasizes the critical importance of providing accurate and reliable information in addressing substance use disorders (SUDs) and co-occurring disorders (CODs), which encompass mental health conditions. Ensuring that individuals seeking guidance on alcohol use disorder receive evidence-based and current information is essential to mitigate potential harm from misinformation. Efforts to bridge the gap between treatment needs and actual care for individuals with CODs underscore the necessity of disseminating accurate information to promote better outcomes in managing these complex conditions (10).

In our study, we aimed to examine the videos containing alcohol use disorder content on the YouTube platform and to examine the quality of the content and its compliance with the DSM-5 criteria. This assessment is intended to investigate the availability of YouTube as a

reliable educational resource by measuring the quality and accuracy of content.

METHODS

The focus of the research is to examine content related to alcohol use disorder in English-language videos published on the YouTube (YouTube©, https://www.youtube.com; YouTube, LLC, San Bruno, CA, USA) platform for their potential to provide basic information to the general population. During this evaluation process, compliance with the Modified DISCERN scale, the Global Quality Scale (GQS) scale, and the DSM-5 manual guidelines were taken into account.

The research was designed with a cross-sectional analytical design. Between May 18, 2013, when the DSM-5 guide was first published, and January 18, 2024, it was uploaded to the YouTube platform and analyzes were carried out on videos in English. Keywords used to search for videos include "alcoholism", "alcohol dependence", "alcohol abuse", "alcohol exposure", "alcohol use disorder", "alcohol misuse", "alcohol withdrawal", "unhealthy alcohol use", "alcohol". intoxication", "alcoholic patients", "alcohol related problems", "drinkers", "problem drinking", "alcohol dependent patients", "alcohol addiction", "SAI-AD", "alcoholism treatment", "alcohol use treatment" , and "alcoholic". Searches performed with these keywords formed the basis for guiding the data collection process of the study. All videos suggested by the search engine after entering the keywords were recorded and watched for potential inclusion in the study. Videos that met the exclusion criteria were excluded from the study. Videos that met the following exclusion criteria were not included in the study:

• Non-medical content (ads, news or interviews)

• Videos published in a language other than English

• Videos with ads

• Live action images without educational content (real-life videos)

• Comedy or funny content that is not intended for educational purposes

• Duplicate images

• Videos that do not include the topic of alcohol use disorder

• Videos containing topics other than alcohol use disorder

• videos published before 2013

• Content that requires membership and fees

• Short videos that YouTube defines as "Shorts"

The videos included in the study were carefully examined by two emergency medicine specialist physicians. In cases where there is a dispute between two physicians, the opinion of a third emergency medicine specialist physician was consulted Dec. The videos were evaluated in detail according to the Modified DISCERN

scale, Global Quality Scale (GQS) scale, DSM-5 guidelines and Video Power Index (VPI).

The reliability and integrity of the information contained in the content were evaluated using the modified DISCERN scale. For each question, an evaluation was made in the form of "Yes": 1 point, "No": 0 points. The answers given to each question were collected and the overall reliability and integrity level of the video was determined.

- Are the sources used valid? (Valid studies, neurology specialists)
- Is the information provided balanced and impartial?
- Are additional information sources specified for the patient/Octopus?
- Did the video address controversial or ambiguous topics?

The Global Quality Scale (GQS) scale has been used to evaluate the video quality. On this scale, the scoring ranges from December 1 to Dec 5, and the different score ranges represent certain quality levels. The scoring system and its definitions are stated below.

- ***Low Quality (1-2 Points):*** This December of points refers to low quality. The video content is insufficient, the information may be incomplete or misleading. The flow is poor and is not useful for patients.
- ***Medium Quality (3 Points):*** A medium quality score means that the video content is generally poor, some information is missing, and the streaming is suboptimal. Although some important information has been discussed, others are insufficient and may be partially useful for patients.
- ***High Quality (4-5 Points):*** This interval of points represents high quality. The video content is usually well-streamed and contains most of the relevant information. However, some issues may be missing. Such videos are useful for patients and offer complementary information.
- ***Very High Quality (5 Points):*** The highest scores represent the high-level quality of the video content. The flow and presentation are excellent and extremely convenient for patients. These videos provide complete and clear information and cover all important topics.

The DSM-5 Guideline includes diagnostic criteria for making a diagnosis of alcohol use disorder, as well as other psychiatric diseases,. Unlike the DSM-4, sub-diagnoses such as "Addiction", "Abuse", "Harmful Use" have been removed and the diagnosis name "Alcohol Use Disorder" has been given. There are 11 different criteria for the diagnosis of alcohol use disorder in the guideline. These are used to determine mild, moderate and severe disorders; 2-3 criteria indicate mild, 4-5 criteria indicate moderate, and 6 or more criteria indicate severe disorder. The criteria are as follows and one point is given for each criterion:

• Alcohol is usually taken in larger quantities than desired or for a longer period of time.

• There is a persistent desire or unsuccessful efforts to reduce or control alcohol use.

• Too much time is spent on activities necessary to obtain alcohol, use it, or get rid of its effects.

• A strong desire or urge to use alcohol.

• Repetitive alcohol use that causes inability to fulfill basic role obligations at work, school or home.

• Continuous alcohol use continues despite the problems caused or exacerbated in the social or interpersonal area. Dec.

• Withdrawal or reduction of important social, professional or recreational activities due to alcohol use.

• Repeated alcohol use in physically dangerous situations.

• Despite the use of alcohol, the continuation of a constant or uncomfortable condition that occurs or worsens due to alcohol.

• Development of tolerance: Drinking an increased amount of alcohol to achieve drunkenness or the desired effect, or a decrease in the effect of the same amount of alcohol.

• Appearance of withdrawal symptoms: Alcohol withdrawal syndrome or alcohol use to relieve or prevent alcohol withdrawal symptoms.

Another evaluation scale, the Video Power Index (VPI), was used to examine the effectiveness and power of videos. The VPI calculation is done with the following formula:

Video Power Index = ((Like Rate x View Rate) / 100)

The calculations of the liking rate and the viewing rate are as follows:

Liking Ratio = (Number of Likes x 100) / (Number of Likes + Number of Dislikes)

View Rate = (Number of Views / Days)enme Oranı = (İzlenme Sayısı / Günler)

The like rate indicates how many people liked a video, while the view rate indicates the average daily number of views of the video. The multiplication of these values forms the VPI and reflects the effectiveness and power of a video.

Statistical Analysis

The statistical analysis in the study was conducted using IBM SPSS 20.0. Descriptive analyses were presented indicating percentages, means, standard errors, medians, 25th and 75th percentiles. Mann Whitney U test was used for comparisons between two groups. Kruskall Wallis test was employed for comparisons among more than two groups. Pearson Chi-Square test was utilized for comparisons between cross-tables. The results were presented in graphs and tables.

RESULTS

As a result of the research, 926 videos were obtained. 506 Videos were included in the study. 420 pieces of video were excluded from the study after examination. The reasons related to the exclusion from the study are summarized in Flow Chart (figure 1).

The results in the table were reached when the videos included in the study and the videos removed from the study were compared. In the study, when parameters such as video vduration, view count, like count, dislakie count, like ratio view ratio and video power index were examined, no statistically significant difference was found between the groups in the videos excluded from the study and the videos included in the study (table 1). When looking at the sources of the videos included in the study, the findings in the graph were determined. Official institutions account for the smallest share, contributing just 0.8% of the videos. Health professionals are a more significant source, producing 28.3% of the content. Videos from patients and their relatives make up 14.8%, while rehabilitation institutions contribute a similar portion, at 13.4%. The most notable observation is that a large segment of the videos, 42.7%, originates from unknown sources.

The 506 videos included in the study were analyzed according to DISCERN. When the videos were examined in the study, it was seen that controversial issues were not mentioned in many videos. Additional sources were stated in 25.5% of the videos. In 68% of the videos, information was presented in a balanced and unbiased manner. In 80.4% of the videos, the sources from which the information in the videos are taken are valid sources. The understandability of videos was found to be 76.5% (table 2).

The average DISCERN score is 2.54±0.38 points. Median and percentage values are given in the table according to source of videos. There is no significant differences are detected in DISCERN score when divaded groups according to source of videos.

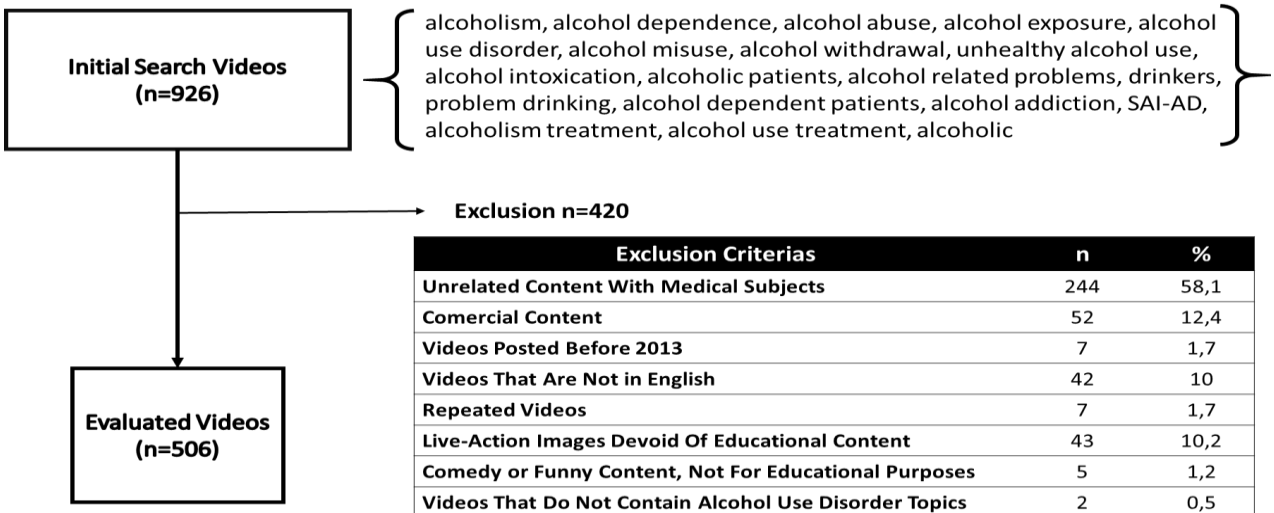
Videos were evaluated according to GQS. It was found that 1% of the videos were of very high quality. However, generally the videos were rated as medium quality (35%) and good quality (22%). The percentage of videos identified as low and very low quality were 28% and 14%, respectively (table 3).

In the analyzes conducted according to the Video Power Index, no statistically significant difference was detected between the groups when the sources of the videos were taken into account (figure 5).

Videos uploaded by official institutions are generally evaluated as medium and good quality. It was observed that the videos uploaded by health professionals were predominantly medium quality and poor quality. It was observed that good and medium

quality videos were more common in the videos uploaded by patients and their relatives. It was observed that videos in the medium and poor quality categories were more common in videos whose source could not be identified (unknown)

When the videos included in the study were examined according to the DSM-5, it was seen that the average video mention score of the categories in the DSM-5 was 10, and Deciency in this score was not detected between the groups.



Exclusion Criterias	n	%
Unrelated Content With Medical Subjects	244	58,1
Comercial Content	52	12,4
Videos Posted Before 2013	7	1,7
Videos That Are Not in English	42	10
Repeated Videos	7	1,7
Live-Action Images Devoid Of Educational Content	43	10,2
Comedy or Funny Content, Not For Educational Purposes	5	1,2
Videos That Do Not Contain Alcohol Use Disorder Topics	2	0,5
Videos Containing Topics Other Than Alcohol Use Disorder	18	4,3
Total	420	100

Figure 1. Flow Chart

Table 1. Comprasion of Videos Which Excluded and Accepted

Comprasion of Videos Which Excluded and Accepted

		Mean	Std. Error	Median	25. Percentil	75. Percentil	P Value
Video Duration	*Accepted*	776	68	411	173	843	0,738
	Excluded	698	480	266	148	1680	
View Count	*Accepted*	113575	20731	1350	142	15547	0,190
	Excluded	133367	117829	30924	795	199653	
Like Count	*Accepted*	245998	63877	17	2	183	0,155
	Excluded	1566752	1566625	241	13	2350121	
Dislike Count	*Accepted*	51	12	0	0	7	0,211
	Excluded	74	67	15	0	111	
Like Ratio	*Accepted*	98	1	100	98	100	0,555
	Excluded	99	2	100	95	100	
Viewing Ratio	*Accepted*	141	38	2	1	13	0,300
	Excluded	14	7	19	1	21	
Video power index	*Accepted*	166	45	3	1	19	0,431
	Excluded	14	7	18	1	20	

Mann Whitney U Test

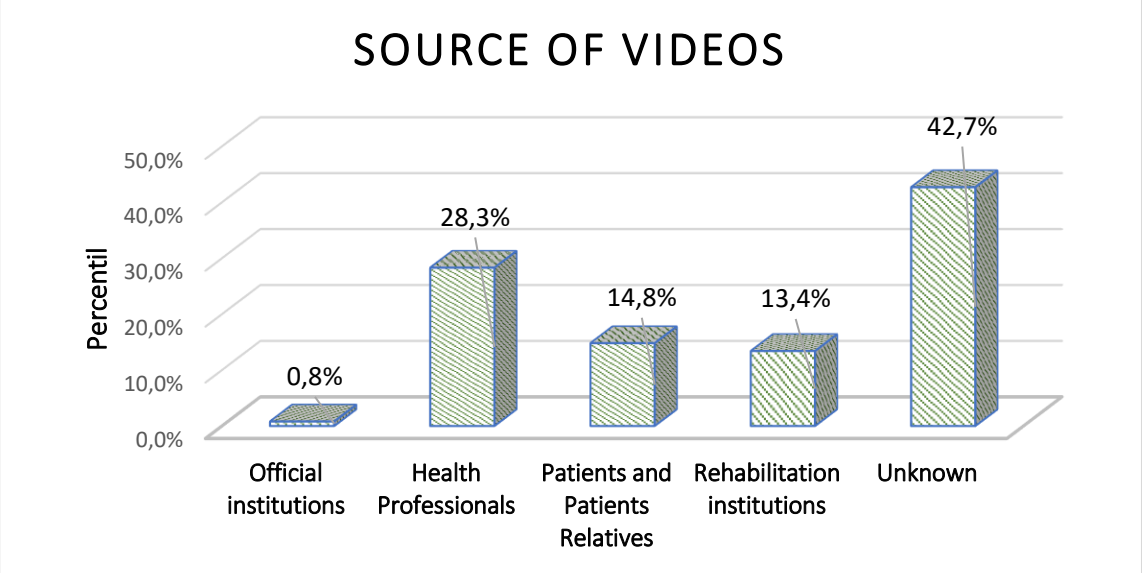


Figure 2. Source of Videos

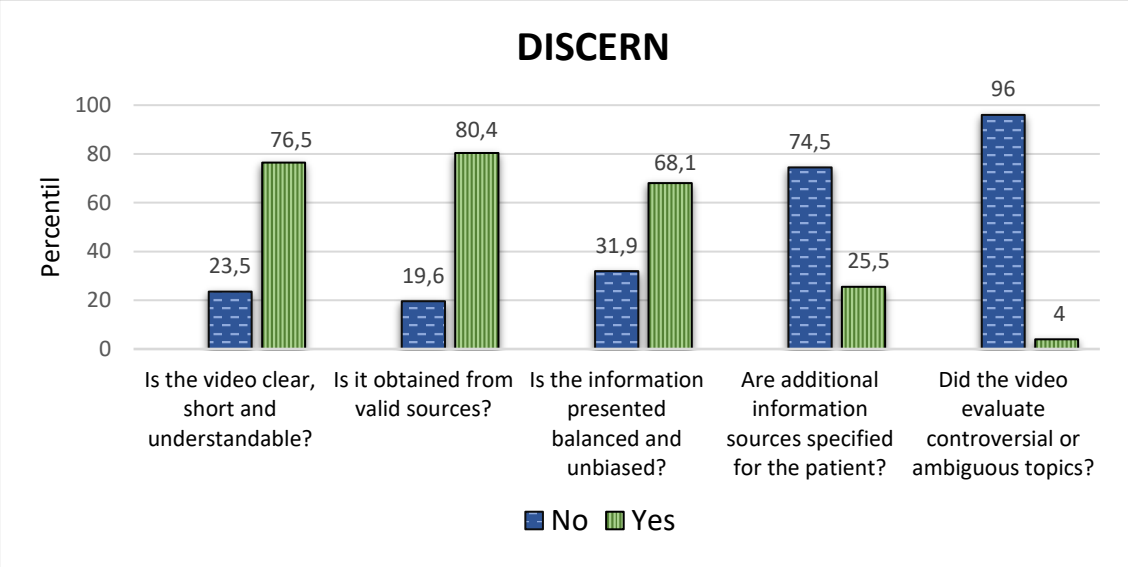


Figure 3. DISCERN

Table 2: DISCERN comparison of videos by sources

	DISCERN			
Source of Video	Median	25. Percentil	75. Percentil	P value
Official institutions	2,5	1,5	3	
Health Professionals	3	2	3	
Patients and Patients Relatives	2	2	3	0,610
Rehabilitation institutions	2	2	3	
Unknown	2	2	3	

Kurskal Wallis Test

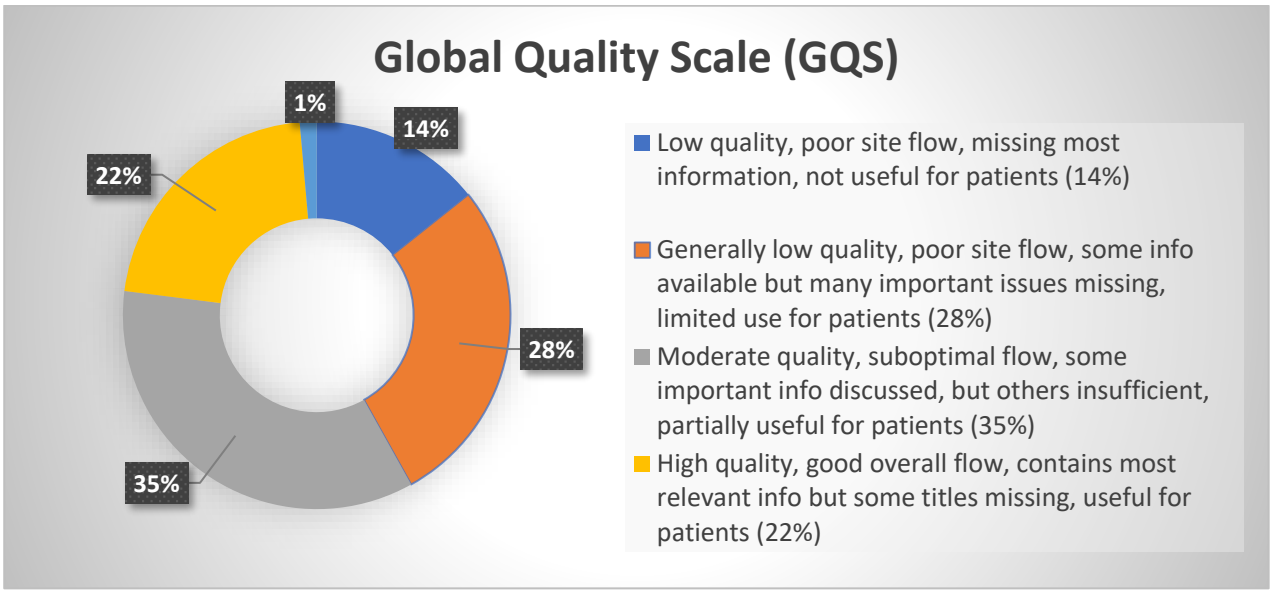


Figure 4. Global Quality Scale

Table 3. Video Power Index

	Video Power Index			
Source of Video	Median	25. Percentil	75. Percentil	P value
Official institutions	1,195	9,115	197,95	
Health Professionals	0,23	1,59	13,3	
Patients and Patients Relatives	0,61	3,2	63,69	0,367
Rehabilitation institutions	0,58	1,225	7,97	
Unknown	0,16	2,455	27,38	

Kurskal Wallis Test

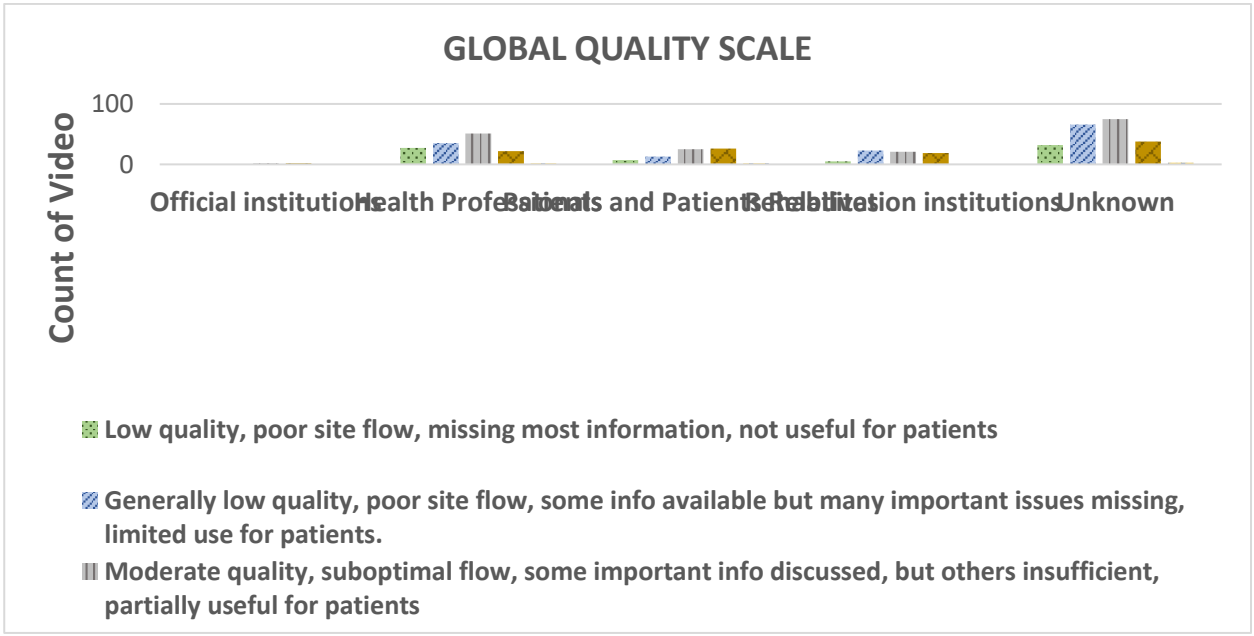


Figure 5. Global Quality Scale

Pearson Chi-Square 0,031

DISCUSSION

Alcohol use is an important health problem in today's societies. Many people turn to various resources to get rid of alcohol addiction or reduce alcohol consumption. With the development of the internet age and the widespread use of social media, people conduct their research on alcohol addiction and consumption on platforms such as YouTube. YouTube hosts videos that provide information about the pathogenesis, diagnosis, treatment and prevention of various health conditions (9).

The effect of YouTube videos on alcohol abuse can be multifaceted. On one hand, YouTube can serve as a platform for educational content, providing valuable information about the risks and consequences of alcohol abuse, as well as resources for seeking help and support. However, on the other hand, YouTube may also host content that glamorizes or normalizes excessive alcohol consumption, potentially perpetuating harmful behaviors or misconceptions about alcohol use. In studies, tobacco and alcohol images on yotube are often included in the lyrical and visual content of popular music videos and are seen by a very large proportion of young people (11). On the contrary, there are few professional institutions on YouTube that support individuals considering quitting alcohol use disorder (12).

In our study, the contents of the videos uploaded to the YouTube platform were examined and analyzes were made according to the sources that uploaded the video. Based on search queries, approximately 45% of the videos uploaded to YouTube were excluded because they were not related to advertising, entertainment or alcohol abuse. This rate is quite high. The keywords used in the search engine are generally written to obtain information about alcohol addiction. However, only 55% of the consequences faced by users are related to alcohol addiction. This shows that users are forced to watch too many advertisements and irrelevant videos in their efforts to obtain information about alcohol addiction and consumption.

Providing accurate, reliable information to users in health-related searches is important for public health. This situation should be taken into account and different algorithms should be used for users searching for health-related information. However, as we observed in our study, this situation is not taken into account in YouTube's search engine. Developing new search algorithms or creating artificial intelligence-based search engines is important to provide more accurate and faster information to users.

Patients with chronic diseases are increasingly relying on internet-based resources to manage their conditions (13). According to surveys conducted by the Pew Research Center, for 75 percent of such patients, their decisions about how to treat their condition are influenced by information obtained through online health

information searches (14). Health service providers and government agencies express concerns about the accuracy and quality of the information available on this platform (15). The reliability of information sources on sites such as Youtube is not guaranteed by the company. For this reason, there is a risk of spreading misleading information. Therefore many authors and researchers recommend that governments, professional organizations, and healthcare professionals actively participate in YouTube by developing and uploading such videos to YouTube. In this way, it will be easier to disseminate accurate and reliable information and reach people (16).

The source of the vast majority of the 45% of the videos included in the study could not be identified. The videos uploaded by official institutions and associations to the online platform only account for only 14% of the total number of videos. Videos uploaded by health professionals are 28%. There is no verification system for the accuracy of the information provided for videos that are of interest to public health and have the potential to reach all people globally. In the analyses conducted according to the Global Quality Scale, videos were generally evaluated as medium and high quality. When the videos were decoupled into groups according to their sources, it was seen that there was no difference between the groups in the power index of the videos. This situation indicates that the risk of spreading the erroneous information mentioned above is significantly higher. It is an indication that the user is watching videos without paying enough attention to the information provider source. Official institutions need to upload more, or an algorithm should be developed in which videos are presented more Decently to those uploaded by official institutions in health-related requests in search engines.

In the analyses conducted according to DSM-5, it was seen that the video sources were mentioned in the categories given in DMS-5 during the video duration. In the DSM-5, 11 different parameters have been categorized for alcohol use disorder, and alcohol use disorder is classified according to the scores given to these categories. When analyzing videos, it is usually seen that all the features are mentioned in the vast majority of videos.

The use of alcohol among young people is increasing recently. An international problem requires an international solution. Action should be taken by the alcohol industry and its marketers, public health policy makers, non-governmental organizations and international organizations to prevent the recurrence or overcoming of high levels of alcohol-related harm(17). In this case, YouTube can play an important role in terms of appealing to a wide population.

Emergency medicine physicians are one of the departments that most often encounter alcohol-related health problems. It is also known that

such applications may be seen more frequently in societies where alcohol consumption is widespread. This situation highlights that alcohol-related problems are a significant burden on health systems.

Video access sites such as YouTube should have educational videos for patients who go to the emergency department with such complaints, where the emergency physician can direct the patient after the patient's discharge and provide information about alcohol to the patient. In these videos, patients can provide information about issues such as the effects of alcohol, symptoms of alcohol use disorder and healthy lifestyle options. These videos should be uploaded by official institutions and the accuracy of the information contained in them should not be doubted. Videos prepared and approved by official health organizations contain reliable and accurate information. It is also important that the content in these videos is understandable and accessible, so that it becomes understandable and usable by a wide audience. In addition, these videos can offer practical tips and guidance on dealing with emergencies associated with alcohol use. In this way, patients can make more informed decisions at home after being discharged from the emergency department and seek appropriate help when necessary. Such educational videos can increase the level of knowledge of both patients and healthcare professionals and contribute to the prevention of alcohol-related health problems.

CONCLUSION

In conclusion, the presence of reliable and accessible educational videos on platforms like YouTube can potentially have a positive impact on emergency admissions related to alcohol-related issues. By providing accurate information and guidance, these videos may help individuals make more informed decisions about their alcohol consumption, potentially reducing the frequency of emergency department visits due to alcohol-related health problems. However, further research is needed to fully assess the effectiveness of such educational interventions in mitigating the burden of alcohol-related emergencies on healthcare systems.

Ethics Committee Approval: Ethics committee approval for this study was obtained from the Balıkesir Atatürk City Hospital Scientific Research Ethics Committee. Decision no: 2024/02/08

Peer-review: Externally peer-reviewed

Author Contributions: Concept: ÖFT, AÇ, Design: ÖFT, ZKE, Data Collection and Processing: İEİ, ÖFT, AÇ, FM, SÖ, Analysis

and Interpretation: ZKE, RY, HG, Writing: ÖFT, AÇ, AOK, TSM.

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