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Analysis of the YouTube™ Videos about Children with Cerebral Palsy: A Research Article**

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ABSTRACT:
Purpose: Cerebral palsy (CP) is a long-term disability and parents need to be informed throughout their lives. The videos shown on YouTube™, may be inadequate or contain erroneous information since they are not subjected to a process of evaluation and are not regularly updated. The aim of this study was to investigate the scientific content and quality of YouTube™ videos related to CP.
Material and Methods: The YouTube™ online library was searched using the term "Children with Cerebral Palsy". The quality and content of the videos was explored with the GQS (Global Quality Scale) and scientific content with the CPss (Cerebral Palsy Scoring System). The characteristics of the videos (video length, source, date of upload, likes etc.) were recorded.
Results: The study was completed with 29 videos. 43.44% of the videos included in the study contained diagnostic information, 23.3% contained information about treatment, and 21.18% contained information about comorbidities. The mean GQS score was 1.96 ±1.34, the CPss score was 5.75±4.08. According to the quality level of the information content, only 1 video qualified as providing good, 7 videos as moderate, and 21 videos as providing poor information.
Conclusion: Healthcare professionals should be aware that videos shared on YouTube™ to provide information may have inadequate information content and quality and should guide patients to e-information sources that provide accurate and reliable information.
Keywords: *Cerebral Palsy, Children, YouTube, Video, Quality*

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INTRODUCTION

Cerebral palsy (CP) was defined as "a group of permanent disorders of the development of movement and posture, causing activity limitation that are attributed to non-progressive disturbances that occurred in the developing fetal or infant brain" (Rosenbaum et al., 2007). Frequently motor impairment is accompanied by secondary problems such as epilepsy, swallowing and eating difficulties, sensory and perception issues, behavioral problems, and musculoskeletal deformities (Rosenbaum et al., 2007; Sucuoğlu, 2017). CP is the most common childhood physical disability; its prevalence on a global scale is approximately 2.11 per 1000 live births. Prevalence of the disease decreases as a country's level of development increases (Oskoui et al., 2013). Treatment involves a multidisciplinary approach that includes physiotherapy, occupational therapy, pharmacological treatment and speech and language therapy. The aim is to provide children with continuous rehabilitation in order to have them reach their maximum potential and prevent functional decline (Vos et al., 2013). Cerebral palsy is a non-progressive disorder. On the other hand, the

disabilities caused by the disease and additional issues cause children with CP to need constant and special care (Majnemer et al.,2007; Sardana et al., 2016). Families who encounter this issue at a baby's birth or shortly afterwards are at the beginning of a challenging journey. Parents need to be able to accept the new situation and need help in their attempts to arrange their lives around the needs of their child (Saygi et al., 2015). It has been reported in studies (Buran et al., 2009; Saygi et al., 2015) that the most urgent need of parents of children with CP is to become informed about how to plan their child's future and the organizations that their child can benefit from. Since cerebral palsy is a long-term condition, parents' need for information and problem-solving will continue to be present throughout their lives (Rosenbaum, 2003). One of the trends in today's world is that people try to gather information from the internet, especially concerning matters of health (Yavuz et al., 2020). It is reported in the literature that eight out of every ten users of the internet use this medium to access health data (Atkinson et al., 2009; Hesse et al., 2006). At the same time, it has also been asserted that the number of websites on health is increasing at a faster speed than general internet use (Moretti et al., 2012) and that patients consider the internet a valuable source of health information (McMullan, 2006). One of the internet tools that is among the most commonly referenced by patients is the YouTube™ platform. YouTube™ is a preferred medium due to the wide visual content available, its capability of allowing the sharing of patient experiences, and its ease of accessibility (Bozkurt et al., 2019). However, videos shared on YouTube™ may contain misinformation or inadequate information because they do not have an evaluation process and are not regularly updated (Pamukcu and Izci Duran, 2021). Studies that have assessed the content of YouTube™ videos on various matters of health have revealed 17-19 that these videos may contain scientifically erroneous and misleading information that might have a negative impact on patient health. Therefore, it is important that individuals learn how to interpret the information accessed and how to evaluate the quality of the content (Hassona et al., 2016; Lim Fat et al., 2011; Ozturk and Gumus, 2021). This requires a developed health literacy capability. Health literacy is defined as the capacity to obtain the necessary basic health information and services, interpret and understand the knowledge collected in order to be able to make the right decisions (Ceyhan et al., 2020). It is reported in a study conducted in eight member countries of the European Union (Austria, Bulgaria, Germany, Greece, Ireland, Netherlands, Poland, Spain) that more than 10% of the total population has inadequate health literacy. One out of every two persons have been found to have limited health literacy (Sørensen et al., 2015). When it is considered that a relatively low number of people have developed health literacy skills, it is evident that the deficient and erroneous information disseminated in most YouTube™ videos is a matter that needs to be addressed. A scan of the literature did not reveal any study on the assessment of available English videos on cerebral palsy. Moreover, we believe that it is important to evaluate videos on this topic, as caregivers need constant information over their lifetime. This is why we attempted to assess the scientific content and quality of the English language YouTube™ videos related to cerebral palsy in the present study.

MATERIAL and METHODS

Purpose and Type of the Study

This is a cross-sectional study and the aim of this study was to investigate the scientific content and quality of YouTube™ videos on CP.

Sampling and participant

We performed a systematic search using the term "Children with Cerebral Palsy" in the YouTube™ platform on February 5, 2022. By using the Google Trends application, we found that the "Children with Cerebral Palsy" keyword had been frequently searched on Google by nonprofessional individuals. Google Trends is a trending search feature that shows how many times a particular search term was entered into our search engine over a specific time period. In the present study, the keywords "Children with Cerebral Palsy," "Cerebral Palsy and children," "Cerebral Palsy kids," and "Kids with Cerebral Palsy" were searched in the application. It was determined that the term "Children with Cerebral Palsy" was

used most frequently (Figure 1).

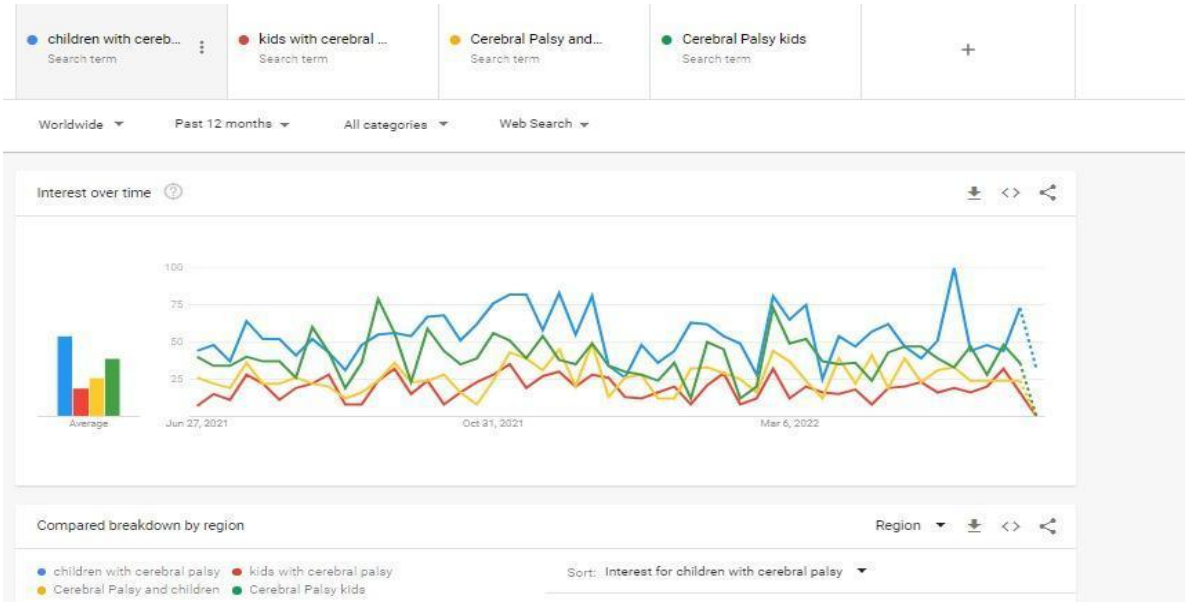

Figure 1. Keywords selection by using Google trends application

Two researchers independently performed the video scan (O.F. and S.D.) Cookies, cache and history were cleared and incognito mode was used on the YouTube™ website to avoid restrictions based on user history so that a broad range of search results could be extracted. Disagreements were resolved by consultation with a third researcher (MC) or by reaching final consensus after discussion. Studies show that 95% of people only look at the first three pages when searching online (Hegarty et al., 2017). In this study, searching was performed by selecting the number of views using the filter options and the top 60 videos were included for the evaluation. Video searches have been similarly performed using the filter "view count" like other studies in literature (Desai et al., 2013; Gokcen and Gumussuyu, 2019). The exclusion criteria were the following: non-English videos; advertisements; duplicate videos; unrelated videos; videos exceeding 15 minutes; videos with no audio or visual content.

Data Collection Tools

Characteristics of each video were recorded: Title of the video and Uniform Resource Locator (URL) information, Video length, Number of subscribers, Upload date, Days since upload, Source of upload (academic, health personnel/health institution, TV channels/news agencies, individual and commercial), Number of likes, Source of narration (patient/parents, health personnel, and voice-only), Number of comments, Video type (real, animation) and View count.

In most studies, video popularity was evaluated with the Video Power Index (VPI). The number of dislikes for YouTube™ videos can no longer be displayed, and therefore we were unable to calculate the VPI. We considered the view ratio to determine the popularity of the videos (Hassona et al., 2016).

View ratio= number of views / days

We assessed the overall quality of the videos with The Global Quality Scale (GQS). The GQS is a five-point Likert scale, with one point showing poor quality and five points indicating excellent quality (Bernard et al., 2007). We found no validated questionnaire about Cerebral Palsy in the literature. As in other studies, a useful scoring system specific to Cerebral Palsy was created and named the Cerebral Palsy Scoring System (CPss); in this system, scores were given for video specific content and quality (Erdem and Karaca, 2018; Staunton et al.,

2015). This new scoring system was set up by summarizing the main headings of the guideline "Cerebral palsy in under 25s: assessment and management" (UK, 2017) published in 2017 (Table 1). In creating the scoring system, the opinions of experienced experts (1 pediatrician, 1 physiotherapist, 1 statistician, 1 academic in pediatrics) were obtained. The video contents were divided into three groups: diagnostic information, associated comorbidities and treatment/rehabilitation information. Each item scored 1 point, resulting in a maximum score of 21 points (Table 1). Video quality was categorized as good information (15-21), moderately good information (8-14) and poor information (0-7).

Table 1. Cerebral Palsy Scoring System

Criteria		Mentioned	Not mentioned/incorrect information
Diagnostic information (0-5)	Definition (General Introduction)	1	0
	Classification	1	0
	Risk factors/ causes of Cerebral Palsy	1	0
	Diagnosis	1	0
	Clinical and developmental manifestations	1	0
Associated comorbidities (0-9)	Nutritional disturbance	1	0
	Mental health problems	1	0
	Epilepsy	1	0
	Speech, language and communication difficulties	1	0
	Behavioral difficulties	1	0
	Musculoskeletal problems	1	0
	Low bone mineral density	1	0
	Pain, discomfort, distress and sleep disturbance	1	0
	Other comorbidities (cognitive and learning disabilities, sensory disabilities, constipation, vomiting, regurgitation and reflux, hearing/visual impairment)	1	0
Treatment/ Rehabilitation (0-7)	Pediatric medicine	1	0
	Surgical treatment	1	0
	Physiotherapy	1	0
	Speech and language therapy	1	0
	Occupational therapy	1	0
	Orthotics and prosthesis rehabilitation	1	0
	Social care	1	0

Statistical Analysis

SPSS version 25.0 (SPSS Inc., Chicago, IL, USA) for Windows was used in the evaluation of the data. The distribution of the variables was measured with the Shapiro-Wilk test. The Mann-Whitney U-test was utilised in comparing the means of two non-normally distributed groups, whereas the Kruskal-Wallis test assessed the means of three or more groups. For post-hoc testing, the Dunn test was performed. Spearman Correlation analysis was performed for correlations between continuous variables and $p<0.05$ was accepted as statistical significance level. Intraclass correlation coefficients (ICCs) were used to determine the interobserver reliability. According to the ICCs values, interpretation is made as follows: A value of 0.9 is excellent, values between 0.9 and 0.8 are good, values between 0.8 and 0.7 are moderate and values below 0.7 is poor.[29,30] Cronbach's coefficient was used in the reliability analysis of the CPss items. Cronbach's alpha is a reliability test method that calculates the average value for each item or all items in the scale. A coefficient value of 0.70 and above indicates that the scale is reliable (Yavuz et al., 2020).

Ethical Approval

Informed consent and ethics committee approval is not required as the research is not a study involving direct human participants and/or animals.

RESULTS

As shown in Figure 2., a total of 60 videos were investigated and 29 videos met the inclusion criteria in the study.

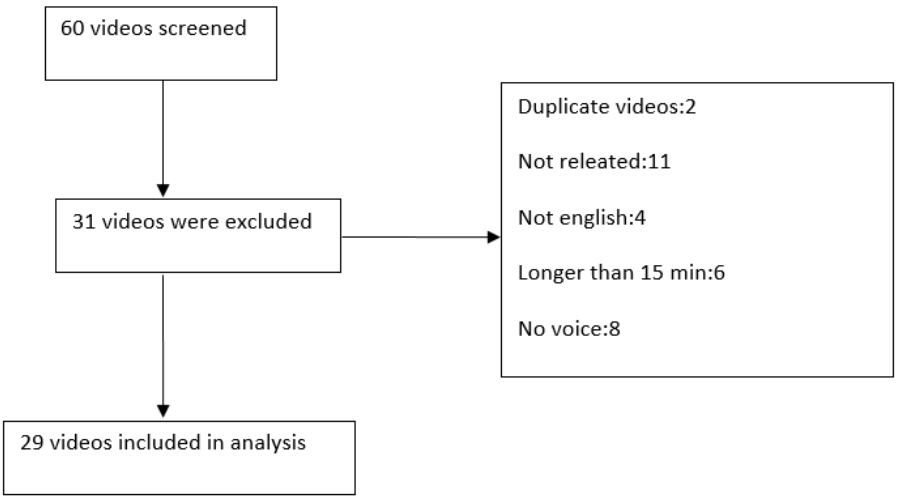

Figure 2. Flow diagram of present study

Table 2. General characteristics of the videos

Video characteristics	n	Median	Minimum	Maximum	Mean±SD
Number of views	29	287705	89550	4056026	481443.48±731478.42
Number of likes	29	1500	0.00	52000	5773.06±11736.49
Video length in minutes	29	5.15	1.30	13.36	5.89±3.23
Number of comments	29	273	0.00	2371	291.33±518.82
Number of subscribers	29	102000	1070	9680000	1376725.51±2701675.41
Days since upload	29	1785	567	21161	2697.17±3741.40
Viewing rate	29	139.55	30.48	2807.99	314.36±5.59

n: sample size, SD: standard deviation

The general characteristics of the videos are shown in Table 2. The number of views was 481,443.48±731,478.42 and 27 (93.1 %) of the videos were live-action videos. Fifteen videos were uploaded by health personnel or health institutions and 13 (44.8%) videos were narrated by patients/parents. Among the videos, 43.44% of the videos included diagnostic information, while 23.3% contained treatment-related information, and 21.18% provided information about associated comorbidities.

The evaluation of video characteristics according to video sources is displayed in Table 3. As regards video sources, statistically significant differences were found between the groups in terms of video length, the viewing rate, and the number of comments ($p<0.05$). According to the results of the post-hoc analysis, videos produced by individuals were longer than videos uploaded by health personnel/health institutions ($p=.042$). The videos uploaded by the TV channels/news agencies had a higher viewing rate than the videos uploaded by academics ($p=.008$).

The mean GQS score was 1.96 ±1.34; the CPss score was 5.75±4.08. Spearman's correlation analysis showed a significant correlation between GQS and CPss scores ($r=0.889$, $p<0.05$). The GQS scores showed positive relationships with CPss scores (Table 4).

An evaluation of quality scores according to video source and video information content are displayed in Table 5. The results of multiple comparison analysis showed that there was no statistical difference between GQS and CPss scores in terms of video source and video content ($p>0.05$). The GQS and CPss scores were higher in animation videos than in live-action videos ($p<0.05$). In addition, the videos narrated by voice-overs had higher GQS and CPss scores than videos narrated by patients/parents or health personnel ($p<0.05$).

Table 3. Evaluation of videos according to the video source

Variables	Academic[a] (n=2)	Health personal/ health institution [b] (n=15)	TV channels/news agencies[c] (n=2)	Individual[d] (n=4)	Commercial[e] (n=6)	P-value	Multiple comparison Dunn Test
	Median (Q.25-Q.75)	Median (Q.25-Q.75)	Median (Q.25-Q.75)	Median (Q.25-Q.75)	Median (Q.25-Q.75)		
Number of views	510014 (114992-905036)	188628 (115050-383210)	2289485.5 (522945-4056026)	581042 (374711-724353.5)	422895 (418215-478905.5)	0.153	
Number of likes	6174 (348-12000)	680 (546.5-1700)	23550 (8100-39000)	4900 (3350-8950)	10000 (5700-31000)	0.060	
Video length in minutes	4.49 (2.49-6.50)	4.07 (3.335-4.71)	7.23 (7.14-7.32)	13.17 (9.73-13.26)	5.15 (4.08-7.71)	*0.042	b-d
Number of comments	276 (28-524)	69 (16.5-126.5)	1523.5 (676-2371)	327 (290-473)	22 (12.5-152)	*0.037	
Number of subscribers	1164700 (29400-2300000)	102000 (6130-171000)	9675000 (6970000-9680000)	18600 (11020-2489300)	3210000 (1608060-4105000)	0.130	
Days since upload	12363.5 (3566-21161)	1970 (1409-2226.5)	1170,5 (895-1446)	1052 (809.5-1221)	1633 (1443-2207.5)	0.071	
Viewing rate	37.50 (32.24-42.76)	87.89 (68.60-171.11)	1694.64 (584.29-2804.99)	418.01 (289.03-974.14)	253.23 (222.75-295.37)	*0.008	a-c

*: Kruskal Wallis Test, n: sample size, Q: quartile

Table 4. Comparison of GQS and CPss scores

Video Quality	n	Mean±SD		
Global quality scale	29	1.96±1.34	r	.889
CPss	29	5.75±4.08	p	<0.01

n: sample size, SD: standard deviation, CPss: Cerebral Palsy scoring system

Table 5. GQS and CPss scores according to characteristics of the videos

	GQS		Multiple comparison	CPss		Multiple comparison	n (%)
Video characteristics	**Median (Q.25-Q.75)**	**P-value**	**Dunn Test GQS**	**Median (Q.25-Q.75))**	**P-value**	**Dunn Test CPss**	
Video source							
Academic	3(1-5)			8.5(2-15)			2(6.9)
Health personal/health institution	2(1.5-3)			6(4.5-9.5)			15(51.7)
TV channels/news agencies	1(1-1)	p[1]=.728		4(3-5)	p[1]=.896		2(6.9)
Individual	1(1-1.5)			3(1.5-5.5)			4(13.8)
Commercial	2(1.5-2.5)			7(4.5-7.5)			6(20.7)
Video type							
Live-action	1(1-2)	**p[2]=.010**		4(3-7)	**p[2]=.005**		27(93.1)
Animation	5(5-5)			15.5(15-16)			2(6.9)
Narrator							
Patients/parents [a]	1(1-1)		a-c	4(3-5)		a-c	13(44.8)
Health personnel [b]	1.5(1-2)	**p[1]=.001**	b-c	3.5(2-8)	**p[1]=.011**	b-c	10(34.5)
Voice-overs [c]	4.5(2-5)			11.5(7-15)			6(20.7)

[2]:Mann Whitney-U Test [1]:Kruskal Wallis Test, n:sample size, Q:quartile, GQS: Global quality scale, CPss: Cerebral Palsy scoring system

According to the quality level of information content, only 1 video qualified as good, 7 videos were moderately good and 21 videos were assessed as providing poor information (Table 6). In the multiple comparison analysis, a significant difference in GQS was found in CPss scores between groups.

Interobserver reliability was evaluated and ICCs were calculated. In the CPss, the total ICC value was 0.955 (p<0.001), 0.942, (p<0.001) in the diagnostic information subgroup, 0.910 (p<0.001) in the other comorbidities subgroup, and 0.916 (p<0.001) in the treatment subgroup. There was excellent compliance between two observers. According to the reliability analysis, the Cronbach coefficient of the 21-item CPss was 0.87.

Table 6. Evaluation of videos according to the video content

Variables	Good information[a] (n=1) (3.4%)	Moderate information[b] (n=7)(24.1%)	Poor information[c] (n=21)(72.4%)	p	Multiple comparison Dunn Test
	Median	**Median(Q.25-Q.75)**	**Median(Q.25-Q.75)**		
Number of views	496444	491417(203276-557979)	350620(116758-522945)	.541	
Number of likes	7900	1400(546.5-6750)	1950(680-8100)	.620	
Video length in minutes	13.18	5.18(4.24-6.395)	4.62(3.27-7.19)	.284	
Number of comments	219	125(36-375.5)	117(28-282)	.911	
Number of subscribers	2400000	121000(54065-1260500)	65700(6130-3210000)	.544	
Days since upload	1546	2063(1680-3751)	1467.5(1052-1972)	.400	
Viewing rate	321.11	87.89(61.06-215.24)	180.17(76.11-450.45)	.540	
Global quality scale	5	4(2.5-4.5)	1(1-2)	**<0.01**	**b-c**

n: sample size, Q: quartile

DISCUSSION

It can easily be said that in recent years, the YouTube™ platform has become the most commonly consulted information resource (Simsek et al., 2020). Various studies in the literature on matters of health present evaluations of the content of videos appearing on YouTube™ (Clerici et al., 2012; Erdem and Karaca, 2018; Hassona et al., 2016; Lim Fat et al., 2011; Mukewar et al., 2013; Simsek et al., 2020). We found only one study in the literature from Brazil in Portuguese where videos on CP were discussed (Furtado et al., 2022). CP is the most common cause of physical disability in children and adolescents (Sellier et al., 2016). When it is considered that individuals with CP and their caregivers are in need of information throughout their lives, it is clear that videos should be scrutinized so that people may access the most accurate and high quality sources of knowledge. In this study, we examined the knowledge and quality content of English language YouTube™ videos about children with CP. Our study is the first to explore the reliability and quality of English language YouTube™ videos about children with CP. In the light of the insufficient evidence-based knowledge published regarding English videos on children with CP, the results of the present study are valuable.

There are differences among videos uploaded from different sources. In comparing the features of videos originating from various sources, we saw that the highest numbers of views, likes, comments, subscribers and the highest levels of ratings belonged to videos created by TV channels and news networks (Table 3). Accordingly, a study by Bicer et al. (2021) revealed that videos produced by TV channels and news networks had the highest number of pageviews (Bicer et al., 2021). The quality of the source may have an impact on the access ranking of videos. The fact that TV channels and news networks already have a viewing audience may be a factor that increases the accessibility of videos. The high numbers of views, likes, comments, and subscriptions as well as the high rating percentages recorded despite the fact that only 6.8% of videos originate from TV channels and news networks suggest easy accessibility.

We noted that although the videos uploaded by academics and health professionals/institutions contain much more information, these videos had the lowest viewing rates (Table 3). The low rate of referring to these videos, despite the fact that they contain more accurate and reliable information, is consistent with the conclusion of Desai et al. that " educational videos are viewed less than low-quality videos" (Desai et al., 2013). Accessibility and comprehensibility have as much an effect on viewing rates as content (O'Neill et al., 2014; Staunton et al., 2015). Consequently, this finding led us to conclude that individuals watching videos on health topics tend to watch the first video they can access without considering its source or content. Our results indicate that the longest videos are those that are uploaded from individual accounts. Videos uploaded by health professional or institutions showed significant differences (Table 3). Simsek et al. (2020) similarly found in their study that videos originating

from individual accounts were the longest. We believe that videos produced by individuals are longer because they contain references made to the individual's personal life experiences.

GQS was used in the study to assess the quality of the videos. It has been noted that GQS is the most commonly preferred method of measurement used to analyze the quality of videos in similar studies (Erdem and Karaca, 2018; Furtado et al., 2022; Oztermeli and Karahan, 2020; Sadry and Buyukbasaran, 2021). In our study, the mean GQS score was considerably low (1.96±1.34) (Table 4). A study conducted on developmental dysplasia of the hip found GQS to be 2.46±1.09 (Oztermeli and Karahan, 2020). In a study conducted by Sadry and Buyukbasaran in 2021 on orthodontic clear aligners, GQS was found to be 1.72±0.93. Ozturk and Gumus (2021) reported GQS as 1.79±0.83 in their study on videos related to dental treatment in children. The figure was 1.68±0.87 in a study on kyphosis (Erdem and Karaca, 2018). It can be seen that the results of these studies displayed a low mean for GQS. Our findings were consistent with results reported in other studies on medical topics, indicating that videos appearing on YouTube™ were generally low in quality.

The authors of the present study assessed the information content in the videos with a CPss they developed themselves. It can be said that the results of the analysis showed that the CPss was an adequate, accurate and valid instrument to use in the assessment of video content quality (Cronbach's alpha 0.87). The mean score was found to be 5.75±4.08 on the basis of 21 points (Table 4). This demonstrated considerably low video content quality. Only 21.18% of the videos included in our study have information content about associated comorbidities. It is known that children with cerebral palsy can have additional conditions such as intellectual disability, nutritional problems, problems with the senses, epilepsy, or other systemic disorders (UK, 2017). In the context of the results of our study, we think there is a need for many more videos on secondary problems related to CP and its treatment.

A positive and significant correlation was found between the mean scores obtained from the overall GQS and CPss tools in which we evaluated the quality and content of the videos. (Table 4; $p<0.01$). This finding shows that videos with enriched content are high quality. Two different types of videos were assessed in the study: reels and animated videos. The mean GQS and CPss scores of the animated videos were found to be significantly higher ($p<0.05$). The animation videos in our study consist of videos prepared by academic institutions for educational purposes. It is thought that the high scores of animation videos are due to the fact that they are prepared by academic institutions. In the comparison of GQS and CPss mean scores in terms of the narrating source, it was seen that voice-over videos displayed significantly higher mean GQS and CPss scores ($p<0.05$). Voice-over videos were generally produced by academic institutions or hospitals/health professionals and designed to provide information. It can be said that the fact that the text of the videos pertained to a specific topic and was narrated in an orderly fashion raised the quality of the production.

We found in our study that videos with a low level of informative content (72.4%) were more numerous and that videos displaying high quality information content were relatively few (6.8%). In this context, the results of our study are consistent with those reported in other studies that assess YouTube™ videos on health topics (Ozturk and Gumus, 2021; Simsek et al., 2020). Our study has some limitations. Because the YouTube™ platform is a constantly changing medium, any subsequent search may deliver different results. At the same time, studies reveal that when users search for a particular keyword in the literature, they are likely to view the first 60 videos they encounter. From this perspective, the fact that we assessed only 29 videos that met our criteria is a limitation of our study. Another limitation of our study is that videos longer than 15 minutes were not included. Because there is no other tool available to assess YouTube™ videos, our evaluation based on the GQS and the CPss created by the authors may also be considered a limitation.

CONCLUSION

This study demonstrated that the highest numbers of views, likes, comments, subscribers and the highest levels of ratings belonged to videos created by TV channels and news networks. Videos uploaded by academics and health professionals/hospitals had the lowest view counts. It was noted that GQS and CPss mean scores were considerably low and that there was a significant and positive correlation between overall mean scores. We determined that most of the videos studied had a poor level of informative content. Our findings showed that videos on CP on YouTube™ were of poor quality and provide users with inadequate information. This may be a result of the fact that information shared on YouTube™ can be provided not only by hospitals and health professionals but also by commercial enterprises, individuals and users from all segments of society in the absence of any standards imposed on video content. It can also be said that the ease with which videos can be uploaded to the platform without being subjected to any kind of control mechanism is a factor that affects the level of information provided. A large majority of videos have limited content, which may have a negative impact on the behaviors of CP patients and their parents. Our recommendation would be that videos uploaded to YouTube™ are subjected to quality and content control in the light of standardized criteria. Health professionals as well as physiotherapists and nurses working with children with cerebral palsy and their parents need to be aware of the content available on video-sharing platforms and should be ready to direct their patients to e-information sources that provide accurate and reliable information. The internet/health literacy of patients and their parents must also be raised.

Conflict of Interest

The authors declare no conflict of interest.

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