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Evaluation of Youtube™ training videos on USG-guided peripheral nerve blocks

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Abstract

YouTube is widely utilized as a resource of information supply in the health area, as it is in many subjects. Established in February 2005, YouTube is an independent video-sharing platform that provides persons to detect, observe, and as well as share videos There are no edits accustomed to analyse the qualification and accuracy of the videos. The goal of our research was to analyse the qualification and contents of the videos on USG Guided Peripheral Nerve Blocks on YouTube. On 01.06.2022, a peripheral nerve block was typed in the https://www.YouTube.com/ link search field, accompanied by USG. 100 videos found as a result of the search were reviewed. Url of the videos, uploader name and organization information, duration of the video in minutes, number of views, likes, and dislikes, time from uploading the video to the date it was viewed (in days), resolution of the video, number of interpretations on the video, type of peripheral nerve block, peripheral It was examined whether electrical stimulation was given during the nerve block. Viewing rate, Video Power Index, Interaction index, Global Quality Scale, modified discern scoring system were calculated. No numerically significance was detected between viewing rate, video power index, interaction index, global qualification scale, modified discern scoring system values according to medical doctor- Professional institutions (p>0.05). We think that the accuracy and educativeness of the videos that focus on a specific subject for a specific area of expertise in the field of health we examined in our study, regardless of medical doctor or Professional institutions, are sufficient.

Keywords: Youtube, USG, nerve block

Introduction

Although ultrasonography (USG) is available in many clinics in our country, unfortunately many anesthesiologists do not graduate from training clinics with sufficient experience in the usage of USG in regional anesthesia. This issue is ignored during the resident training process in clinics. In our country, USG-guided courses on peripheral nerve blocks are limited in number and accept only a small number of participants. With the increase in mobile devices, internet access can be provided at any time. The fact that YouTube is free, accessible at any time and having a rich archive on this subject is the reason why it is the most preferred platform.

Established in February 2005, YouTube is an independent video-sharing platform that provides persons to detect, observe, and as well as share videos. Different from medical and health knowledge web platforms where it is probable to assure the qualification and reliability of its contents via licenses, analysing qualification of health videos existing on YouTube is a primitive field, necessitate much relevance [1]. The amount of health-irrelated videos on YouTube is rising continually [2]. In fact, during the Russia-Ukraine war, a Ukrainian doctor uploaded videos with first aid videos so that both health workers and civilians in his country could respond to the wounded [3]. Medical students are more interested in social media, particularly video sharing web platforms including YouTube, like a resource of medical data supply area [4]. Some researches strongly suggest that aside from the low quality of the videos, some videos contain false information that can have negative consequences [5-8]. The videos when prepared by prestigious medical institution may be increasingly useful for regional anesthesia trainees or assistants. The variation of writership and the insufficiency of the peer-reviewed procedure on YouTube have induced illusive as well as insufficient knowledge [9-11]. As USG maintains directly

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view of the needle route, destinated nerve, enclosing the tissues, and local anesthetic diffuse round the nerve, and anesthesiology professionals are be able to practically and more definitely carry out the nerve blockage process [12]. The usage of ultrasound is extremely based on the specialist. Although ultrasound procedure has advantages, some trainess believe that it is hard to gain experience [13]. Regional anesthesia process supports patients by decreasing both acute and chronic postoperative pain, nausea and as well as vomiting, and pulmonary system complicated situations [14]. It has been reported that the sonographic capabilities were carried out increasingly accurately by anesthesia unexperienced as they were maintained via professional routed feedback [15]. For example, the frequency of pneumothorax due to US-guided supraclavicular blocks is lower [16]. In this state, it is very important to make regional blocks. In addition, USG guided blocks reduce complication rates. This highlights the importance of this training.

Material and Methods

Malatya Turgut Özal University Non-Invasive Clinical Research Ethics Committee started working on 26.05.2022 with the approval number 2022-107. The goal of the present research was to analyse YouTube videos convenient to carry out and arrangement of the USG Guided Peripheral Nerve Blocks, via ASRA guidelines and as well as Miller's Anesthesia as references [17,18]. On 01.06.2022, a search was made by typing peripheral nerve block with USG in the https://www.YouTube.com/ link search field. 100 videos found as a result of the search were reviewed. In these videos, those longer than 15 minutes, those whose language is not English, those who do not have a voice, Repeated videos and those that do not contain peripheral nerve block, those who upload videos other than professional organizations and medical doctors were eliminated. The URL of the remaining videos, the uploader or the organization information, the course of the video in minutes, the numberal of views, the numberal of likes, the number of dislikes, the time (in days) from the uploading of the video to the date the video was viewed, the resolution of the video, the amount of commentaries on the video, the type of peripheral nerve block made, It was examined whether electrical stimulation was given during peripheral nerve block. Viewing rate (VR), Video Power Index (VPI), Interaction index (II) Global Quality Scale (GQS), Modified discern scoring system (MDSS) were calculated. Indication related to the block in the video content, surgeries that can be performed thanks to the block, approach to the block area, dermatom information, vascular nerve structure in the block area, description of the anatomical points, complications that may occur, selection of electrical stimulus, needle selection to be used for the block, local anesthetic dose and selection to be made, USG Image clarity, follow-up of the block needle with USG, USG probe selection, USG probe plane information, the diffuse of local anesthetic under USG, and the sterilization of the block area were examined. As a result of the review, 7 videos were excluded due to their length (longer than 15 minutes) 2 videos were uploaded by non-medical professionals, 7 videos did not contain USG accompaniment, 1 video had no sound, and 2 videos were re-uploaded.

Those who upload videos other than professional organizations and medical doctors [19].

GQS criteria

- Low qualification, insufficient current of the video, most knowledge lacking, not at all beneficial for patients (Score: 1)
- Generally low qualification and low flow, some knowledge listed however many significant issues lacking, of very restricted usage to patients (Score: 2)
- Moderate qualification and suboptimal flow process, some significant knowledge is efficiently debated however others inadequately debated, somewhat benefical for patients (Score: 3)
- Adequate qualification and generally adequate flow, mainly related knowledge is listed howerever some subjects not included, benefical for patients (Score: 4)
- Perfect qualification and flow, very benefical for patients (Score: 5)

MDSS

- Are the goals obvious and succeed? (Score; Yes:1, No: 0)
- Are reliable resources of knowledge utilized? (Score; Yes:1, No: 0)
- Is the knowledge indicated balanced and unbiased? (Score; Yes:1, No: 0)
- Are fields of ambiguity a fore mentioned? (Score; Yes:1, No: 0)

VPI scores were counted up utilizing the following formula: (like number/dislike number + count of likes) * 100 [20]. II scores were counted up utilizing the following formula: II (count of likes-count of dislikes/totally count of observations)*100%). VR scores were scored utilizing the following formula: VR (count of views/count of days since uploading process)*100%). Thus, the VPI, II, VR of all videos were calculated [21].

Results

Conformity of continuous variables such as Time in Minutes, count of views, count of Likes, Number of Dislikes, count of days since upload, count of Comments, VR, VPI, II, GQS, MDSS in the research, to the normally dispersion. measured graphically and utilizing the Shapiro-Wilks test. It was determined that none of the continued variants suiting the normally dispersion. Therefore, Median (CIW-Interquartile Width) outcomes were utilized in the display of descriptive statistics. In addition, Mean±Standard Deviation outcomes were utilized in demonstrative statistical methods. Mann- Whitney U test was utilized. Cross-tables were created for the encountering of categorical variants according to the medical doctor-Institution grouping, and test statistics

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of number (n), percent (%) and chi square (χ^2) were given. Period in Minutes, Counts of Views, Number of Likes, Number of Dislikes, count of days since upload, Number of Comments, Viewing Ratio, VPI, II, and the Spearman non-parametric correlation coefficient were also given in the correlation analysis between them.

IBM SPSS Statistics 21.0 (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.) and MS-Excel 2007 programs were utilized for statistical evaluations. Numerical significance was admitted as $p<0.05$.

The median number of views of the medical doctor group was 44630.05±48130.67, and the average count of views of the institutional group was 72171.38±67595.73. A numerically significance was detected among the count of views based on the medical doctor-Professional institutions (z=2.571, p=0.010). No numerically significance was found among the count of times, the count of likes, the count of dislikes, the count of days after uploading, and the number of comments according to the medical doctor-Professional institutions($p>0.05$).

The resolution was 480p in 47.6%, 720p in 33.4% (n=14), 360p in 11.9% (n=5), 240p in 7.1% (n=3), 48.7% in the institution group (n=19) 480p, 15.4% (n=6) 720p, 12.8% (n=5) 360p, 23.1% (n=9) 240p. No numerically significance was detected in resolution quality dispersion according to the medical doctor-Professional institutions (χ^2=6.123, p=0.106) (Table 1).

No numerically significance was detected between VR, VPI, II, GQS, MDSS values according to medical doctor-organization grouping ($p>0.05$) (Table 2).

Table 1. Comparison of duration, count of views, count of likes, count of dislikes, count of days since upload, count of comments and resolution quality by groups

	Medical doctor	Professional institutions	Test statistics	
	Mean±SD Median (CIG)	Mean±SD Median (CIG)	z	p
Duration in minutes	6.13±5.02 5.49 (4.28)	4.80±2.62 4.33 (2.81)	z=1.328	0.184
Number of views	44630.05±48130.67 35066.50 (57348.00)	72171.38±67595.73 57629.00 (54719.00)	z=2.571	**0.010**
Number of likes	245.83±236.14 188.00 (336.00)	361.87±382.43 226.00 (259.00)	z=1.645	0.100
Number of dislikes	10.26±8.97 8.50 (12.00)	16.15±34.20 10.00 (10.00)	z=0.360	0.719
Number of days since upload	2385.86±4713.76 1544.50 (2358.00)	2373.62±1552.89 3182.00 (3163.00)	z=1.801	0.072
Comment	8.76±9.71 6.50 (12.00)	8.97±10.23 5.00 (10.00)	z=0.043	0.966
Resolution n (%)				
720p	14 (33.4)	6 (15.4)	χ^2=6.123	0.106
480p	20 (47.6)	19 (48.7)		
360p	5 (11.9)	5 (12.8)		
240p	3 (7.1)	9 (23.1)		

z: Mann Whitney U test statistic, χ^2: Chi-square test statistic

Table 2. Comparison of viewing rate, VPI, II, GQS, MDSS values by groups

	Medical doctor	Professional institutions	Test statistics	
	Mean±SD Median (CIG)	Mean±SD Median (CIG)	z	p
VR	3518.65±7441.96 1745.35 (3419.04)	6646.24±10668.63 2154.48 (3673.33)	z=1.796	0.073
VPI	94.36±5.39 94.85 (5.80)	95.16±7.57 97.19 (3.58)	z=1.220	0.223
II	1.15±2.91 0.64 (0.73)	0.63±0.55 0.34 (0.68)	z=1.427	0.154
GQS	4.17±1.01 4.50 (1.00)	4.21±0.86 4.00 (1.00)	z=0.082	0.935
MDSS	4.07±1.09 5.00 (2.00)	4.26±0.88 4.00 (1.00)	z=0.502	0.616

z: Mann Whitney U test statistics, VR: viewing rate, VPI: video power index, II: interaction index, GOS: Global Quality Scale, MDSS: modified discern scoring system

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In the medical doctor group, 33.3% (n=14) had no USG proob selection, 66.7% (n=28) had a USG proob selection, 12.8% (n=5) had no USG proob selection in the professional institutions group, and 87.2% (n =34) USG proob selection was found to exist. A numerically significance was found in terms of the dispersion of USG proob selection based on the medical doctor-Professional institutions (χ^2=4.739, p=0.029). No numerically significance was detected in terms of the distribution of other parameters according to the medical doctor-Professional institutions (p>0.05) (Table 3).

While there was no ulnar nerve block in all of the medical doctor group (n=42), 87.2% (n=34) of the professional institutions group had no ulnar nerve block, and 12.8% (n=5) had an ulnar nerve block. A numerically significance was detected in terms of ulnar nerve block distribution based on the medical doctor-Professional institutions (p=0.022). No numerically significance was detected in terms of the distribution of other parameters according to the medical doctor-Professional institutions (p>0.05) (Table 4).

In all groups, a moderate, positive and numerically important association was observed among the time in minutes and the count of likes and comments (r=0.405; p<0.001, r=0.418; p<0.001). A weak, positive numerically important association was detected among the duration in minutes, the count of dislikes and the II (r=0.236; p=0.034, r=0.309; p=0.005).

Table 3. Comparison of parameters between groups

		Group			
		Medical doctor n (%)	Professional institutions n (%)	Test statistics	
				χ^2	p
Indication	**No**	8 (19.0)	13 (33.3)	2.149	0.143
	Yes	34 (81.0)	26 (66.7)		
Surgical feasibility	**No**	11 (26.2)	14 (35.9)	0.893	0.345
	Yes	31 (73.8)	25 (64.1)		
Approach	**No**	4 (9.5)	2 (5.1)		0.374*
	Yes	38 (90.5)	37 (94.9)		
Dermatome information	**No**	6 (14.3)	8 (20.5)	0.548	0.459
	Yes	36 (85.7)	31 (79.5)		
Vascular nerve structure	**No**	2 (4.8)	1 (2.6)		0.528*
	Yes	40 (95.2)	38 (97.4)		
Anatomical point recipe	**No**	1 (2.4)	1 (2.6)		0.734*
	Yes	41 (97.6)	38 (97.4)		
Complication	**No**	20 (47.6)	21 (53.8)	0.314	0.575
	Yes	22 (52.4)	18 (46.2)		
Stimulator selection	**No**	35 (83.3)	34 (87.2)	0.237	0.626
	Yes	7 (16.7)	5 (12.8)		
Needle selection	**No**	24 (57.1)	24 (61.5)	0.162	0.687
	Yes	18 (42.9)	15 (38.5)		
Local anestetic selection	**No**	27 (64.3)	27 (69.2)	0.223	0.637
	Yes	15 (35.7)	12 (30.8)		
Electrical stimulation selection	**No**	33 (78.6)	34 (87.2)	1.048	0.306
	Yes	9 (21.4)	5 (12.8)		
USG image sharpness	**No**	3 (7.1)	6 (15.4)		0.205*
	Yes	39 (92.9)	33 (84.6)		
Needle USG tracking	**No**	8 (19.0)	10 (25.6)	0.509	0.476
	Yes	34 (81.0)	29 (74.4)		
USG proob selection	**No**	14 (33.3)	5 (12.8)	4.739	**0.029**
	Yes	28 (66.7)	34 (87.2)		
Probe plane information	**No**	13 (31.0)	7 (17.9)	1.839	0.175
	Yes	29 (69.0)	32 (82.1)		
Local anesthetic distribution image	**No**	10 (23.8)	13 (33.3)	0.902	0.342
	Yes	32 (76.2)	26 (66.7)		
Sterilization recommendation	**No**	23 (54.8)	24 (61.5)	0.381	0.537
	Yes	19 (45.2)	15 (38.5)		

χ^2: Chi-square Test Statistic, *Fisher Exact Test value is given, USG: utrasound

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Table 4. Comparison of parameters between groups

Blocked nerve or regian		Group		
		Medical doctor n (%)	Professional institutions n (%)	Test Statistics p*
Pudental nerve	**No**	41 (97.6)	39 (100.0)	0.519
	Yes	1 (2.4)	0 (0.0)	
Tibial nerve	**No**	41 (97.6)	39 (100.0)	0.519
	Yes	1 (2.4)	0 (0.0)	
Lumbar plexus	**No**	41 (97.6)	39 (100.0)	0.519
	Yes	1 (2.4)	0 (0.0)	
Cervical plexus	**No**	41 (97.6)	39 (100.0)	0.519
	Yes	1 (2.4)	0 (0.0)	
Interscalene	**No**	41 (97.6)	35 (89.7)	0.157
	Yes	1 (2.4)	4 (10.3)	
Supraclavicular	**No**	35 (83.3)	34 (87.2)	0.626
	Yes	7 (16.7)	5 (12.8)	
Infraclavicular	**No**	40 (95.2)	37 (94.9)	0.664
	Yes	2 (4.8)	2 (5.1)	
Axillary	**No**	39 (92.9)	34 (87.2)	0.315
	Yes	3 (7.1)	5 (12.8)	
Femoral	**No**	37 (88.1)	34 (87.2)	0.582
	Yes	5 (11.9)	5 (12.8)	
Adductor nerve	**No**	40 (95.2)	39 (100.0)	0.266
	Yes	2 (4.8)	0 (0.0)	
Obtrator nerve	**No**	40 (95.2)	39 (100.0)	0.266
	Yes	2 (4.8)	0 (0.0)	
Erector spina	**No**	41 (97.6)	39 (100.0)	0.519
	Yes	1 (2.4)	0 (0.0)	
Genicular nerve	**No**	41 (97.6)	39 (100.0)	0.519
	Yes	1 (2.4)	0 (0.0)	
Sciatica	**No**	39 (92.9)	37 (94.9)	0.536
	Yes	3 (7.1)	2 (5.1)	
Ulnar nerve	**No**	42 (100.0)	34 (87.2)	0.022
	Yes	0 (0.0)	5 (12.8)	
Ankle	**No**	42 (100.0)	38 (97.4)	0.481
	Yes	0 (0.0)	1 (2.6)	
Transversus abdominis plane	**No**	41 (97.6)	38 (97.4)	0.734
	Yes	1 (2.4)	1 (2.6)	
Popliteal nerve	**No**	41 (97.6)	34 (87.2)	0.085
	Yes	1 (2.4)	5 (12.8)	
Saphenous nerve	**No**	42 (100.0)	37 (94.9)	0.229
	Yes	0 (0.0)	2 (5.1)	
Suprascapular nerve	**No**	41 (97.6)	39 (100.0)	0.519
	Yes	1 (2.4)	0 (0.0)	
Occipital nerve	**No**	39 (92.9)	38 (97.4)	0.336
	Yes	3 (7.1)	1 (2.6)	
Median nerve	**No**	42 (100.0)	38 (97.4)	0.481
	Yes	0 (0.0)	1 (2.6)	
Mandibular nerve	**No**	41 (97.6)	39 (100.0)	0.519
	Yes	1 (2.4)	0 (0.0)	
Intercostal nerve	**No**	40 (95.2)	39 (100.0)	0.266
	Yes	2 (4.8)	0 (0.0)	
Pericapsular nerve group block	**No**	42 (100.0)	39 (100.0)	-
	Yes	0 (0.0)	0 (0.0)	
Radial nerve	**No**	41 (97.6)	39 (100.0)	0.519
	Yes	1 (2.4)	0 (0.0)	
Supraorbital nerve	**No**	41 (97.6)	39 (100.0)	0.519
	Yes	1 (2.4)	0 (0.0)	

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A poor, positive and numerically important association was detected among the GQS and the count of Likes, Commentaries, Viewing Ratio, and Interaction Index (r=0.398;p<0.001, r=0.300;p=0.007, r=0.362;p= 0.001, r=0.260; p=0.019). A poor, negative numerically important correlation was detected among the GQS and the Day following Loading (r=-0.224; p=0.044).

A moderate, positive and numerically important association was detected among the MDSS and the Duration in Minutes and the count of Likes (r=0.472; p<0.001, r=0.417; p<0.001). A poor, positive numerically important relationship was assessed among MDSS and Interpretation, Viewing Ratio, II (r=0.308; p=0.005, r=0.372; p=0.001, r=0.261; p=0.018). A poor, negative numerically important correlation was observed among the MDSS and the Day following Loading (r=-0.228; p=0.041) (Table 5).

A high level, positive numerically important association was obtained among the count of views and the count of likes, count of days since upload, and VR in the medical doctor group (r=0.753; p<0.001, r=0.604; p<0.001, r=0.694; p<0.001). A very high, positive numerically important association was observed among the count of views and the count of dislikes (r=0.846;p<0.001). A high positive numerically important association was found among the count of likes and dislikes, the count of commentaries, and the VR (r=0.662; p<0.001, r=0.766; p<0.001, r=0.731; p<0.001). A moderate, positive and numerically important relation was determined among the GQS, period in Minutes and count of Likes (r=0.481; p<0.001, r=0.451; p<0.001). A moderate, positive and numerically important association was gained among the MDSS and the Duration in Minutes and the count of Likes (r=0.475; p=0.001, r=0.426; p=0.005). (Table 6).

A moderate, positive and numerically important correlation was determined among the GQS and the Time in Minutes, Interpretation, and VR (r=0.467; p=0.003, r=0.407; p=0.010, r=0.449; p=0.004) . A poor, positive and numerically important association was found among the GQS, the count of Likes and the Interaction Index (r=0.355; p=0.026, r=0.380; p=0.017). A moderate, negative numerically important correlation was observed among the GQS and the Day following Loading (r=-0.479; p=0.002).

A moderate, positive and numerically important association was found among MDSS and Time in Minutes, Number of Likes, Comments, VR, Interaction Index (r=0.498; p=0.001, r=0.405; p=0.010, r=0.451; p=0.004, r=0.503; p=0.001, r=0.439; p=0.005). A moderate, negative numerically important correlation was gained among the MDSS and the Day After Loading (r=-0.539; p<0.001) (Table 7).

Table 5. Correlation coefficients among YouTube video parameters in all groups

		Duration in minutes	Number of views	Number of likes	Number of dislikes	Day without upload	Comment	VR	VPI	II
Duration in minutes	r									
	p									
Number of views	r	.147								
	p	.189								
Number of likes	r	.405	.710							
	p	**.000**	**.000**							
Number of dislikes	r	.236	.704	.657						
	p	**.034**	**.000**	**.000**						
Number of days since upload	r	-.158	.446	-.004	.258					
	p	.159	**.000**	.971	**.020**					
Comment	r	.418	.522	.697	.437	-.104				
	p	**.000**	**.000**	**.000**	**.000**	.356				
VR	r	.218	.648	.752	.546	-.268	.598			
	p	.051	**.000**	**.000**	**.000**	**.015**	**.000**			
VPI	r	.075	-.074	.247	-.462	-.316	.213	.133		
	p	.507	.509	**.026**	**.000**	**.004**	.056	.236		
II	r	.309	-.396	.213	-.266	-.623	.158	.054	.539	
	p	**.005**	**.000**	.056	**.016**	**.000**	.159	.633	**.000**	
GQS	r	.479	.129	.398	.156	-.224	.300	.362	.078	.260
	p	**.000**	.252	**.000**	.165	**.044**	**.007**	**.001**	.488	**.019**
MDSS	r	.472	.155	.417	.157	-.228	.308	.372	.106	.261
	p	**.000**	.167	**.000**	.162	**.041**	**.005**	**.001**	.348	**.018**

r: Spearman Relationship Coefficient, VR: viewing rate, VPI: video power index, II: interaction index, GQS: Global Quality Scale, MDSS: modified discern scoring system

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Table 6. Correlation coefficients between medical doctor group YouTube video parameters

		Duration in minutes	Number of views	Number of likes	Number of dislikes	Day without upload	Comment	VR	VPI	II
Duration in minutes	r									
	p									
Number of views	r	.149								
	p	.346								
Number of likes	r	.300	.753							
	p	.053	**.000**							
Number of dislikes	r	.128	.846	.662						
	p	.419	**.000**	**.000**						
Number of days since upload	r	.075	.604	.174	.597					
	p	.635	**.000**	.270	.000					
Comment	r	.251	.597	.766	.507	.114				
	p	.109	**.000**	**.000**	**.001**	.472				
VR	r	.073	.694	.731	.541	-.074	.603			
	p	.646	**.000**	**.000**	**.000**	.643	**.000**			
VPI	r	.039	-.187	.217	-.449	-.451	.185	.084		
	p	.809	.235	.167	**.003**	**.003**	.241	.599		
II	r	.170	-.471	.118	-.487	-.735	.033	-.035	.618	
	p	.283	**.002**	.455	**.001**	**.000**	.833	.825	**.000**	
GQS	r	.481	.285	.451	.242	.046	.231	.304	-.002	.102
	p	**.001**	.067	**.003**	.123	.771	.140	.051	.988	.520
MDSS	r	.475	.260	.426	.195	.040	.219	.275	.036	.092
	p	**.001**	.096	**.005**	.215	.803	.164	.078	.823	.561

r: Spearman Relationship Coefficient, VR: viewing rate, VPI: video power index, II: interaction index, GQS: Global Quality Scale, MDSS: modified discern scoring system

Table 7. Correlation coefficients between Professional institutions YouTube Video parameters

		Duration in minutes	Number of views	Number of likes	Number of dislikes	Day without upload	Comment	VR	VPI	II
Duration in minutes	r									
	p									
Number of views	r	.254								
	p	.119								
Number of likes	r	.566	.648							
	p	**.000**	**.000**							
Number of dislikes	r	.418	.586	.694						
	p	**.008**	**.000**	**.000**						
Number of days since upload	r	-.300	.243	-.217	-.004					
	p	.063	.136	.184	.980					
Comment	r	.573	.484	.610	.340	-.249				
	p	**.000**	**.002**	**.000**	**.034**	.127				
VR	r	.422	.607	.784	.576	-.489	.609			
	p	**.007**	**.000**	**.000**	**.000**	**.002**	**.000**			
VPI	r	.182	-.014	.194	-.476	-.300	.273	.151		
	p	.266	.933	.238	**.002**	.063	.093	.359		
II	r	.373	-.280	.331	-.075	-.494	.242	.184	.526	
	p	**.019**	.085	**.039**	.649	**.001**	.138	.262	**.001**	
GQS	r	.467	-.041	.355	.067	-.479	.407	.449	.210	.380
	p	**.003**	.802	**.026**	.687	**.002**	**.010**	**.004**	.199	**.017**
MDSS	r	.498	.001	.405	.109	-.539	.451	.503	.246	.439
	p	**.001**	.996	**.010**	.511	**.000**	**.004**	**.001**	.131	**.005**

r: Spearman Relationship Coefficient, VR: viewing rate, VPI: video power index, II: interaction index, GQS: Global Quality Scale, MDSS: modified discern scoring system

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Discussion

We are of the opinion that the videos of the peripheral nerve blocks made with USG, which are for medical doctors on YouTube and uploaded by medical doctors and professional institutes, contribute to education.

Further than 500 hours of substance are loaded to YouTube each minute. There are localized kinds of YouTube in overall 100 countries all around the world, cross 80 different languages [22]. YouTube has been transformed into a valuable resource to assess videos covering personal stories related health and diseases [23]. YouTube is with further than 4 billion videos watched every day. there is >700 health-associated systems in the United States solely that have an existence on YouTube. Some of the videos were developed for healthcare ensurer like a training visual directory for recent innovation [24]. There are no arrangements or standardizations in respect of the educational views of the videos accessible on YouTube [25]. Web-settled education has appeared like a significant instrument not only to ease obtaining the essential theoretical fundamental, but also to detect or strengthen applied processing capabilities. The effect of videos in medical learning is likely to rise. Researches have underlined the profits of multimedia-developed education; it significantly advances surgical ability and figuring out of complicated temporal and as well as spatial situations [26].

They choose a more simple avaliable knowledge instrument, via feedback, commentariess, and diverse aspects of sight on each issue; several of these are the primary advances of YouTube [27]. No numerically significance was found among the count of times, the count of likes, the count of dislikes, the count of days after uploading, and the count of comments according to the medical doctor-Professional institutions. A probable deficit of education via online videos is the ambiguity concerning the certainty of knowledge and the credibility of authors. It is appropriate for a person who is exposed to misknowledge concerning a specific issue to detect accurate knowledge later. However minor counts of misinformation may induce fundamental difficulties for healthcare workers [28]. The researchers suggested that an experienced committee controls whether the ethical rules are fit and if so, the logo that confirms the quality of this website can be added to their website. With this certificate, consumers will have access to reliable, ethical, quality and transparent health information [29]. There are several probable jeopardies for patients and healthcare ensurers that may be influenced by the dissemination of knowledge of weak qualification. These may influence injury to professional view, contravention patient privity, ruining of personal/professional borders and judicial issues [25].

In our research, no numerically significance was detected among the VR, video strength index, II, GQS, modified discrimination scoring system values according to medical doctor-institution grouping. GQS and MDSS mean values were above 4 in both groups.

YouTube is a platform that persons can publish a video, to the detriment of their objective, medical qualities, professionalism, or goal, and therefore health knowledge accessible on YouTube may vary from elevated qualificated to sales propaganda or pseudo-scientific frauds [30].

We did not include the videos of uploaders other than medical doctors and Professional institutions.

Various researches have originally detected that both the qualification of medical processes and their educational valuation are nominal in videos existed on YouTube [2,31,32]. Due to the structure of our group, the video contents and accuracy were high. Various statements have mentioned that videos loaded by health specialists or academic organizations have increased qualification in comparison with those uploaded by persons, and that these videos may be useful for the users [33].

Some researches that determined online videos for their worth in advancing medical capabilities also detected that the qualification of video correlated with the goal of the video and whether it was uploaded by an organization. Videos uploaded by professional organizations were of incresaed educational qualification than those uploaded by persons [34,35]. In our study, the educational qualification of the videos between the groups was similar.

Up to day, videos regarding neuroxial block methods and lumbar punctures on YouTube have been detected about patient safety, compability via a particular method, and their qualification [36]. This is mainly due to the absence of a review procedure, similarly to the particular literature publication, ambiguity of resources, and their credibility. On the contrary the deficits of YouTube videos, there is no suspicion that several medical students and residents recently still search educational knowledge on YouTube, and that well-prepared educational videos may strengthen their learning, thus serving as a increasingly efficient educational instrument [37]. In my clinic, many clinicians benefit from youtube videos. In addition to the literature, the contribution of these videos cannot be ignored in the education of peripheral nerve blocks performed with USG. Via high availability to the Internet and the common utilization of mobile instruments, trainees with restricted availability to knowledge on new methods and interventions may also be able to reach the instructional subject. On the otherhand, these videos do not experience a peer-review procedure and are solely protected for copyright breach, not for their educational worth and qualification. Several authors declared weak video qualification, uncertain knowledge, absence of audio, and the deficit of objective patient knowledge on videos for widespread surgical processes including appendectomy and cholecystectomy [34]. Researchers have analyzed the qualification of YouTube videos for medical knowledge and capabilities. They detected some videos on YouTube to be educationally benefical; on the otherhand, a great part of videos had a poor quality of education and some even uncertain knowledge [38]. In GQS , videos are determined for their efficiency as a quality evaluation instrument on a 5-point Likert scale. A totally qualification score is analyzed by gaining all subheadings of qualificated content (qualification,

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flow of the videos, knowledge certainty and practicality) together [19]. In our study, we evaluated our videos through the GQS. While there was no numerically significance among the groups, the average of the GQS values was above 4.00.

A modified 5- point DISCERN instrument was utilized in our research, that was utilized in prior researches to reach the reliability of the videos [21].We used the MDSS, which is frequently used in the literature, and we evaluated that there was no difference among the groups. We detected the average MDSS value to be over 4.00.

All groups; A poor, positive and numerically important association was detected among the GQS and the Viewing Ratio and II (r=0.362; p=0.001, r=0.260; p=0.019). A poor, positive numerically important relationship was assessed among MDSS and Viewing Ratio, II (r=0.372; p=0.001, r=0.261; p=0.018).

Professional institutions; A moderate, positive and numerically important correlation was determined among the GQS and the VR (r=0.449; p=0.004) A poor, positive and numerically important association was found among the GQS, the II (r=0.380; p=0.017). A moderate, positive and numerically important association was found among MDSS VR, II (r=0.503; p=0.001, r=0.439; p=0.005). There was no significant relationship between the GQS and MDSS and video scales in the doctor group. Aydın et al. in their research there was no correlation among VPI and qualification determination tecniques [21]. In our study in all group, A high positive numerically important association was found among the count of comments and the VR. A high level, positive numerically important association was obtained among VPI and II. In Medical Doctor group, A high positive numerically important association was detected among the count of commentaries and the VR. A high positive numerically important association was observed between VPI and II. In Professional institutions GROUP, A high positive numerically important association statistically significant relationship was assessed among VPI and II. Finally we found that there is no association among operator interactions and the qualification of videos. The parameters correlating with VPI were flow of knowledge and knowledge certainty. To rise the interaction of shared videos on online platforms, users should maintain certain knowledge in a basic and perceivable method [21]. Selvi et al. analyzed 86 videos regarding brachial plexus block in terms of content and instruction. Most of the videos reviewed for this study concluded that they lacked the comprehensive method essential to reliable guide someone searching knowledge regarding brachial plexus nerve blocks [39]. The results of our study are not parallel to this study. Since we eliminated many videos in our study because they did not meet the specifications, we think that our results came out in this way. Lee et al. evaluated the educational qualification of laparoscopic cholecystectomy (LC) videos on YouTube. They detected no correlation among video content qualification and count of views, likes/dislikes, and commentaries [10]. In their research analyzing the qualification of the videos on YouTube regarding knee arthrocentesis, Fischer et al. choose videos loaded by professional health organizations. Additionally, they declared that YouTube content had weak educational qualification even when uploaded by healthcare specialists [32]. Related to anesthesia, we are aware of solely a research by Rössler et al. that analyzed videos uploaded before and including 2009. In the research, 16 spinal anesthesia and 22 lumbar puncture videos were analyzed and the videos' quality was detected to be poor and the authors declared that and some aseptic methods that could be accepted dangerous were utilized [40]. Especially in the videos of the past, content and information errors are more common. We believe that this study has reached these results, since the study does not belong to recent years.

Conclusion

As a result, YouTube is an important platform for healthcare professionals with many advantageous aspects. It is important that the uploader is a doctor or Professional institutions in order to provide information on a specific subject only. In addition, it is very important to compare information and verify the literature by watching many videos in this area. We believe that this platform will become even more valuable with the video tracking system and certification.

Limitations

The limitation of our study is the small number of videos evaluated. In addition, different videos in the same group could not be evaluated.

Conflict of Interests
The authors declare that there is no conflict of interest in the study.

Financial Disclosure
The authors declare that they have received no financial support for the study.

Ethical Approval
Malatya Turgut Özal University Non-Invasive Clinical Research Ethics Committee started working on 26.05.2022 with the approval number 2022-107. Our study does not cause any harm to the environment and does not involve the use of animal or human subjects.

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