

Assessment of YouTube videos on ultrasound-guided lower extremity peripheral nerve blocks

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Cite this article: Göger E. Assessment of YouTube videos on ultrasound-guided lower extremity peripheral nerve blocks. *Eur J Anesthesiol Intens Care.* 2025;2(1):12-17.

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Received: 06/11/2024

Accepted: 29/11/2024

Published: 03/02/2025

ABSTRACT

Aims: Numerous YouTube videos on lower extremity nerve blocks, frequently utilized for analgesia in anesthesia practice, are available to the public. To prevent the spread of incorrect or incomplete information and reduce information pollution, it is essential to review these videos critically. Accordingly, this study assessed the educational content and preparation quality of videos on YouTube about lower extremity nerve block.

Methods: Two structured surveys assessed ten different types of lower extremity nerve block educational videos on YouTube. Each survey comprises 14 questions, each scored on a scale from 0 to 5. This results in a total possible score between 0 and 70 for each video per survey.

Results: A statistically significant and strong correlation was observed between the video preparation quality score and the video educational quality score ($p < 0.001$). Additionally, there was a statistically significant positive association between the number of video likes and both the video preparation quality score and the video educational quality score ($p < 0.05$ for each).

Conclusion: While YouTube provides a range of medical training videos, concerns persist regarding the reliability of this content. Consequently, obtaining medical information from reputable sources such as peer-reviewed academic journals or publications issued by official medical organizations offers a more accurate and dependable foundation for research.

Keywords: Analgesia, lower extremity nerve blocks, regional anesthesia, YouTube videos

INTRODUCTION

Founded in 2005, YouTube has become one of the world's largest video platforms, hosting a vast range of content and millions of videos. Users can access information across diverse fields, including educational content, entertainment, news, and the arts. Platforms like YouTube allow individuals to acquire new skills and gain insights into various topics by offering information from multiple perspectives.¹ YouTube can be a valuable resource for quick and easy access to medical information, assisting in health-related topics. While the widespread use of these platforms facilitates access to accurate and reliable information, it may also make finding correct information challenging, potentially leading to misinformation, especially in health matters. Accessing accurate and trustworthy information in healthcare is essential. Medical videos on YouTube are an indispensable tool for healthcare professionals and medical students.

Moreover, this content can make a significant contribution to learning. However, there are important considerations for viewers when watching these videos, such as verifying sources, prioritizing credible information, focusing on content grounded in scientific evidence, and seeking expert opinions.²⁻⁶ Some health videos may be created by individuals who still need to gain experience in their fields of expertise. In such cases, doubts may arise regarding the content's accuracy, reliability, and scientific foundation. Additionally, some videos may contain misleading or incorrect information, potentially misleading viewers.^{7,8} There is a substantial body of literature evaluating videos on interfascial plane nerve blocks and upper extremity peripheral nerve blocks available on platforms like YouTube.⁸⁻¹² Some studies have assessed the educational content quality and production quality of these videos.^{8,9,12,13} Although numerous studies have evaluated regional anesthesia

videos on YouTube, more literature is needed regarding the assessment of videos related to lower extremity nerve blocks on this platform. Anesthesiologists and anesthesia residents commonly perform lower extremity nerve blocks to reduce postoperative pain and for anesthetic purposes. This study aims to evaluate the quality of educational content and the production of videos on ten different types of lower extremity nerve blocks available on YouTube.

METHODS

Ethical committee approval was not required because this study did not involve human or animal subjects. Searching for and recording video URLs on YouTube was completed in a single session on 10/31/2024. The video search was conducted using the YouTube search engine with the following terms: “lumbar plexus block ultrasound, suprainguinal fascia iliaca block (SIFIB) ultrasound, pericapsular nerve group (PENG) block ultrasound, femoral block ultrasound, lateral femoral cutaneous nerve (LFCN) block ultrasound, adductor canal block ultrasound, obturator nerve block ultrasound, interspace between the popliteal artery and capsule of the posterior knee (IPACK) block ultrasound, sciatic nerve block ultrasound, popliteal nerve block ultrasound.” The videos were filtered and ranked by view count, with the top 5 most-watched videos for each block recorded, as view counts dropped significantly after the first five videos. Five anesthesiologists with at least 8 years of clinical experience in lower extremity peripheral nerve blocks reviewed and evaluated the videos. Two separate surveys were used to assess the YouTube videos: survey 1 evaluated the educational content, and survey 2 evaluated the quality of the videos.

Inclusion Criteria

English-language, ultrasound-guided, and videos on lower extremity peripheral nerve blocks.

Exclusion Criteria

Non-English videos, videos without ultrasound imaging, irrelevant videos, silent videos, duplicate videos, videos shorter than 1 minute and longer than 20 minutes (as extreme video lengths may compromise the objectivity of the evaluation).

Survey 1 consists of 14 questions related to the quality of the educational content of the videos. This survey form was developed based on previous studies (Table 1).^{11,13,14}

Table 1. Video educational content quality evaluation

Survey 1

1. Are the clinical indications for the block clearly explained?
2. Are anatomical landmarks clearly explained or marked?
3. Has the block anatomy been clearly explained?
4. Has the suspected mechanism of action been clearly explained?
5. Has technical information regarding probe selection and frequency of the ultrasound device been explained?
6. Has ultrasound anatomy been clearly demonstrated and explained?
7. Were the recorded sono-anatomical images and anatomical structures in the recording clear and easy to perceive?
8. Was the ultrasound image of the needle visible and easy to follow?
9. Are instructions for depth, alignment, and direction of needle movements clearly explained?
10. Has information regarding the spread of local anesthetic been explained?
11. Is information about in-plane or out-of-plane techniques given in the video?
12. Has the sterile technique been clearly explained or emphasized?
13. Has the information regarding the local anesthetic agent been explained clearly?
14. Have the possible complications associated with this block technique been explained?

Survey 2 consists of 14 questions assessing the production quality of the videos (Table 2). It was developed following guidelines prepared by the National Career Development Association (NCDA).¹⁵

Table 2. Video preparation quality assessment

Survey 2

1. Is the purpose of the video clearly stated and explained in the first quarter of the video?
2. Was the title or name of the video appropriate to the purpose of the video?
3. Were the design and content of the video suitable for the intended educational purpose?
4. Have the skills and technique of the procedure been explained using a standard, comparable, “step-by-step” method?
5. Was the information provided in the video useful for viewers to develop/improve their skill base?
6. Was the content of the video appropriate for the health and safety of both the patient and the practitioner?
7. Was the quality of the picture acceptable in terms of colors and clarity?
8. Was the quality of the video audio acceptable? (No sounds should be scored as zero)
9. Was the length of the video balanced with the content of the video?
10. Is information regarding production or release date, producers and references clearly explained?
11. Are the objectives, learning tasks, and terminology clearly stated in the video to enable viewers to perform these tasks?
12. Does the video contain additional aids such as stop-and-discuss points, scenarios, and/or a summary of the procedure?
13. Has information been provided about a way to evaluate the effectiveness and repeatability of the video?
14. Did the content of the video encourage viewers to move from passive spectators to active practitioners in the implementation of the practice?

The anesthesiologists evaluating the videos scored each question on a scale from 0 to 5 (0=very bad, 1=bad, 2=it will do, 3=good, 4=very good, 5=perfect). Each video received a total score between 0 and 70, based on the questions in survey 1 and survey 2 (0-14: very bad, 15-28: bad, 29-42: it will do, 43-56: good, 57-70: very good).

The Following Data were Recorded for the Videos

We recorded the relevant URLs of the videos, video duration, number of days the videos had been accessible, view count, source of the videos (whether academic or not), the total number of likes, and the scores given by experts on survey 1, and survey 2.

Statistical Analysis

The data obtained in the study were analyzed using the IBM Statistical Package for Social Sciences (IBM-SPSS Inc., Chicago, IL, USA) version 26.0. The normality of data distribution was assessed with the Shapiro-Wilk test. Continuous variables were expressed as median (25-75 percentile) based on their distribution, and categorical variables were presented as frequency and percentage. Spearman's rho correlation test was applied to the correlation analyses of continuous variables. A p-value of <0.05 was considered statistically significant.

RESULTS

The words “SIFIB ultrasound, PENG block ultrasound, femoral block ultrasound, LFCN block ultrasound, adductor canal block ultrasound, obturator nerve block ultrasound, IPACK block ultrasound, sciatic nerve block ultrasound, popliteal nerve block ultrasound” were posted on YouTube. The first five most watched videos for each block (50 videos) were evaluated (Table 3). When video characteristics are evaluated, “number

of video views” is 81027 (33339-143113) (median (25-75 percentile), “number of video likes” is 440 (205-740) (median (25-75 percentile), and “video duration (seconds)” is 315 (247-452) (median (25-75 percentile). The video educational quality score was 11 videos (22%), “bad,” 37 videos (74%), “it will do,” and 2 videos (4%) “good,” the median (25-75 percentile). The video educational quality score was 29 (19-36). The video preparation quality score was 11 videos (22%) with “bad,” 37 videos (74%) with “It will do,” and 2 videos (4%) with “good” median (25-75 percentile). The video preparation quality score was 35 (31-40) (Table 3).

Table 3. Video characteristics, and quality score values

Video characteristic feature	n (%) median (25-75 th percentile)
Video views	81027 (33339-143113)
Number of video likes	440 (205-740)
Video duration (seconds)	315 (247-452)
Video educational quality score	29 (19-36)
Video educational quality score classification	Very bad 2 (4%)
	Bad 23 (46%)
	It will do 23 (46%)
	Good 2 (4%)
Video preparation quality score	35 (31-40)
Video preparation quality score classification	Bad 11 (22%)
	It will do 37 (74%)
	Good 2 (4%)
Group	LPB 5 (10%)
	SIFIB 5 (10%)
	PENG 5 (10%)
	FNB 5 (10%)
	LFCN 5 (10%)
	ACB 5 (10%)
	ONB 5 (10%)
	IPACK 5 (10%)
	SNB 5 (10%)
	PNB 5 (10%)

LPB: Lumbar plexus block, SIFIB: Suprainguinal fascia iliaca block, PENG: Pericapsular nerve group block, FNB: Femoral nerve block, LFCN: Lateral femoral cutaneous nerve block, ACB: Adductor canal block, ONB: Obturator nerve block, IPACK: Interspace between the popliteal artery and capsule of the posterior knee block, SNB: Sciatic nerve block, PNB: Popliteal nerve block

The 14 parameters and evaluation scores examined for the video educational quality score were shown separately. The three parameters most marked for the video, with “very bad” as the evaluation score, were “Was the sterile technique clearly explained or emphasized?” There were 31 videos (62%) for the option, 28 videos (56%) for the option “Was the information regarding the local anesthetic agent explained clearly?” and 28 videos (56%) for the option “Have possible complications related to this block technique been explained?”. The two parameters most marked for the video with “very good” as an evaluation score were “Was the block anatomy clearly explained?” 20 videos (40%) for the option and “Are anatomical landmarks clearly explained or marked?” For the option, there were 16 videos (32%) (Table 4).

The 14 parameters and evaluation scores examined for the video preparation quality score were shown separately. The one parameter most marked for the video was “very bad” as an evaluation score, with 25 videos (50%) for the option “Was information provided about a way to evaluate the effectiveness and repeatability of the video?”. As an evaluation score, “good, very good, and perfect” are the parameters marked for most videos, and “was the title or name of the video appropriate to the purpose of the video?” (23 videos (46%), 20 videos (40%), and 1 video (2%), respectively) (Table 5).

In examining the relationship between video educational quality score, video preparation quality score, and video

Table 4. Video educational quality questions

Question	Degree	n (%)
Are the clinical indications for the block clearly explained?	Very bad	13 (26%)
	Bad	7 (14%)
	It will do	11 (22%)
	Good	14 (14%)
	Very good	5 (10%)
	Perfect	0 (0%)
Are anatomical landmarks clearly explained or marked?	Very bad	0 (0%)
	Bad	1 (2%)
	It will do	6 (12%)
	Good	27 (54%)
	Very good	16 (32%)
	Perfect	0 (0%)
Was the block anatomy clearly explained?	Very bad	0 (0%)
	Bad	4 (8%)
	It will do	6 (12%)
	Good	20 (40%)
	Very good	20 (40%)
	Perfect	0 (0%)
Has the suspected mechanism of action been clearly explained?	Very bad	13 (26%)
	Bad	18 (36%)
	It will do	14 (28%)
	Good	5 (10%)
	Very good	0 (0%)
	Perfect	0 (0%)
Has technical information regarding probe selection and frequency of the ultrasound device been explained?	Very bad	10 (20%)
	Bad	9 (18%)
	It will do	9 (18%)
	Good	14 (28%)
	Very good	8 (16%)
	Perfect	0 (0%)
Has ultrasound anatomy been clearly demonstrated and explained?	Very bad	0 (0%)
	Bad	3 (6%)
	It will do	11 (22%)
	Good	20 (40%)
	Very good	16 (32%)
	Perfect	0 (0%)
Were the recorded sono-anatomical images and anatomical structures in the recording clear and easy to perceive?	Very bad	2 (4%)
	Bad	4 (8%)
	It will do	10 (20%)
	Good	21 (42%)
	Very good	13 (26%)
	Perfect	0 (0%)
Was the ultrasound image of the needle visible and easy to follow?	Very bad	8 (16%)
	Bad	4 (8%)
	It will do	11 (22%)
	Good	15 (30%)
	Very good	12 (24%)
	Perfect	0 (0%)
Are instructions for depth, alignment, and direction of needle movements clearly explained?	Very bad	14 (28%)
	Bad	11 (22%)
	It will do	11 (22%)
	Good	12 (24%)
	Very good	2 (4%)
	Perfect	0 (0%)
Has information regarding local anesthetic dissemination been explained?	Very bad	13 (26%)
	Bad	4 (8%)
	It will do	18 (36%)
	Good	11 (22%)
	Very good	4 (8%)
	Perfect	0 (0%)
Was information given about the in-plane or out-of-plane technique in the video?	Very bad	5 (10%)
	Bad	12 (24%)
	It will do	16 (32%)
	Good	15 (30%)
	Very good	2 (4%)
	Perfect	0 (0%)
Has sterile technique been clearly explained or emphasized?	Very bad	31 (62%)
	Bad	3 (6%)
	It will do	11 (22%)
	Good	4 (8%)
	Very good	1 (2%)
	Perfect	0 (0%)
Was the information regarding the local anesthetic agent explained clearly?	Very bad	28 (56%)
	Bad	2 (4%)
	It will do	7 (14%)
	Good	11 (22%)
	Very good	2 (4%)
	Perfect	0 (0%)
Have possible complications related to this block technique been explained?	Very bad	28 (56%)
	Bad	3 (6%)
	It will do	8 (16%)
	Good	10 (20%)
	Very good	1 (2%)
	Perfect	0 (0%)

Table 5. Video preparation quality questions

Question	Degree	n (%)
Is the purpose of the video clearly stated and explained in the first quarter of the video?	Very bad	6 (12%)
	Bad	6 (12%)
	It will do	15 (30%)
	Good	17 (34%)
	Very good	6 (12%)
Was the title or name of the video appropriate to the purpose of the video?	Perfect	0 (0%)
	Very bad	0 (0%)
	Bad	2 (4%)
	It will do	4 (8%)
	Good	23 (46%)
Were the design and content of the video suitable for the intended educational purpose?	Very good	20 (40%)
	Perfect	1 (2%)
	Very bad	0 (0%)
	Bad	0 (0%)
	It will do	12 (24%)
Have the skills and technique of the procedure been explained using a standard, comparable, "step-by-step" method?	Good	26 (52%)
	Very good	12 (24%)
	Perfect	0 (0%)
	Very bad	1 (2%)
	Bad	5 (10%)
Was the information provided in the video useful for viewers to develop/improve their skill base?	It will do	20 (40%)
	Good	18 (36%)
	Very good	6 (12%)
	Perfect	0 (0%)
	Very bad	0 (0%)
Was the content of the video appropriate for the health and safety of both the patient and the practitioner?	Bad	0 (0%)
	It will do	9 (18%)
	Good	24 (48%)
	Very good	17 (34%)
	Perfect	0 (0%)
Was the quality of the picture acceptable in terms of colors and clarity?	Very bad	3 (6%)
	Bad	8 (16%)
	It will do	14 (28%)
	Good	15 (30%)
	Very good	10 (20%)
Was the quality of the video audio acceptable? (No sounds should be scored as zero)	Perfect	0 (0%)
	Very bad	0 (0%)
	Bad	5 (10%)
	It will do	9 (18%)
	Good	26 (52%)
Was the length of the video balanced with the content of the video?	Very good	10 (20%)
	Perfect	0 (0%)
	Very bad	6 (12%)
	Bad	11 (22%)
	It will do	22 (44%)
Is information about the production or release date, producers and references clearly explained?	Good	10 (20%)
	Very good	1 (2%)
	Perfect	0 (0%)
	Very bad	2 (4%)
	Bad	8 (16%)
Are the objectives, learning tasks, and terminology clearly stated in the video to enable viewers to accomplish these tasks?	It will do	26 (52%)
	Good	14 (28%)
	Very good	0 (0%)
	Perfect	0 (0%)
	Very bad	9 (18%)
Does the video include additional aids such as stop-and-discuss points, scenarios, and/or summary of the procedure?	Bad	7 (14%)
	It will do	11 (22%)
	Good	21 (42%)
	Very good	2 (4%)
	Perfect	0 (0%)
Was information provided about a way to evaluate the effectiveness and repeatability of the video?	Very bad	25 (50%)
	Bad	7 (14%)
	It will do	17 (34%)
	Good	0 (0%)
	Very good	1 (2%)
Did the content of the video encourage viewers to shift from passive spectators to active practitioners in the implementation of the practice? technical?	Perfect	0 (0%)
	Very bad	0 (0%)
	Bad	1 (2%)
	It will do	5 (10%)
	Good	25 (50%)
	Very good	19 (38%)
	Perfect	0 (0%)

characteristics, a statistically significant positive correlation was found between the video educational quality score and the number of video likes. Regarding the relationship between video preparation quality score and video characteristics, there was a statistically significant positive correlation between the number of video likes and video duration. A strong positive correlation was also observed between video education and preparation quality (Table 6).

Table 6. Relationship between video evaluation scores and video characteristics

Characteristic property	Video educational quality score		Video preparation quality score	
	R-value	p value	R-value	p value
Video views	0.13	0.39	0.084	0.56
Number of video likes	0.395	<0.05	0.3	<0.05
Video duration (seconds)	0.255	0.074	0.278	0.05
Video educational quality score			0.804	<0.001
Video preparation quality score	0.804	<0.001		

DISCUSSION

In this study, in examining the relationship between video educational quality score, video preparation quality score, and video characteristics, a statistically significant positive correlation was found between the video educational quality score and the number of video likes. Regarding the relationship between video preparation quality score and video characteristics, there was a statistically significant positive correlation between the number of video likes and video duration. A strong positive correlation was also observed between video education and preparation quality.

Visual information is as important as theoretical knowledge in lower extremity nerve block applications. Therefore, evaluating videos on platforms that publish educational content, such as YouTube, is essential. Studies in the literature have evaluated educational videos with various types of YouTube content.^{8,12,16} This study is the first to collectively evaluate videos on YouTube related to ten different types of lower extremity nerve blocks. Previous research highlights the importance of YouTube medical education videos containing complete and accurate information.^{8,9,17-19} Studies have emphasized that the quality of YouTube videos is generally low regarding medical content.^{11,14,20} In this study, none of the videos achieved a "perfect" rating based on survey 1 and survey 2, and only two videos were rated as "good." According to survey 1, 23 videos were rated as "bad" and "it will do," while survey 2 rated 11 videos as "bad" and 37 as "it will do." Similar to previous studies, this study demonstrated that YouTube videos were generally not at a sufficient quality level. This finding suggests that although educational videos often meet a certain standard, areas need improvement. Therefore, platforms like YouTube should strive to enhance their quality monitoring processes to ensure users access more reliable, informative, and impactful content. Providing feedback to content providers and encouraging them to produce higher-quality material could be an effective way for platforms to improve content quality. It is essential to guide content creators to convey accurate information on topics that require expertise, such as healthcare, education, and other specialized fields. Studies have reported that sterility is often not emphasized in the videos and that sterility procedures are not adequately explained.^{8,9} This study noted that a significant portion of the evaluated videos needed to explain sterility and

adhere to sterility protocols adequately. Neglecting sterility in nerve block procedures poses serious risks to patient safety. Adhering strictly to sterility standards is crucial for reducing infection risks and achieving optimal clinical outcomes. Healthcare professionals should know the importance of complying with sterility standards through regular training and awareness programs. In this study, it was noted that the videos provided clear anatomical explanations and had good anatomical visuals in terms of educational quality. However, many videos needed a method to evaluate their effectiveness, and the content did not progress step-by-step.

In contrast, the videos were reported to encourage viewers to attempt to block applications moderately. This study demonstrates that the educational and preparation quality of the videos varies, with areas needing improvement. While certain aspects were rated quite well, others received lower scores, indicating the need for revisions in some parts of the videos to achieve a more balanced educational quality.

In this study, the positive correlation between video length and the number of likes with educational and preparation quality suggests that viewers place more trust in longer, detailed content, reflected by higher like counts. This indicates that educational videos offering a certain depth and level of detail are perceived by viewers as more reliable and comprehensive.

The significant positive correlation between educational and preparation quality scores indicates that preparation quality elements, such as sound and visuals, are directly related to content quality. This suggests that when videos are produced according to technical quality standards, the perceived reliability and effectiveness of the content increase. From a technical standpoint, well-prepared videos are likely to be taken more seriously by viewers and positively impact learning processes. This finding emphasizes the importance of content richness and audiovisual quality during the video preparation stage, indicating the need for a comprehensive preparation process to enhance the effectiveness of videos, especially those in educational and professional fields.

Some studies have highlighted a significant relationship between view count and video quality,^{8,9} while other studies have reported no such relationship between view count and video quality.^{14,21} In this study, view count was found to have no significant relationship with quality scores. This suggests that view count may not be an indicator of quality but is likely influenced by other factors, such as video accessibility or popularity.

Limitations

This study analyzed only videos available on YouTube. Other video-sharing platforms also feature educational videos. Excluding videos from other platforms limited access to a broader and more diverse content pool on lower extremity peripheral nerve blocks. Therefore, the study reflects data solely from YouTube and only encompasses potential findings that could be obtained by evaluating educational materials available on other platforms.

CONCLUSION

Lower extremity peripheral nerve blocks are complex regional procedures in the final stages of anesthesiology training,

requiring experience and expertise. Learning such a complex process solely through videos is not feasible; a clinical approach and hands-on practice are essential. While many physicians use social media platforms to enhance their learning and clinical experience, our study suggests they should provide more excellent educational value for lower extremity peripheral nerve blocks. Therefore, we recommend that anesthesiology communities ensure that such educational videos are developed under guidelines and reviewed by experts.

ETHICAL DECLARATIONS

Ethics Committee Approval

Ethical committee approval was not required because this study did not involve human or animal subjects.

Informed Consent

Informed consent was not required because this study did not involve human or animal subjects.

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Financial Disclosure

The authors declared that this study has received no financial support.

Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

REFERENCES

1. YouTube statistics. URL: <https://www.youtube.com/yt/press/statistics.html>.
2. Azer SA, Algrain HA, AlKhelaif RA, AlEshaiwi SM. Evaluation of the educational value of YouTube videos about physical examination of the cardiovascular and respiratory systems. *J Med Internet Res*. 2013;15(11):e241. doi:10.2196/jmir.2728
3. Ng FK, Wallace S, Coe B, et al. From smartphone to bedside: exploring the use of social media to disseminate recommendations from the national tracheostomy safety project to front-line clinical staff. *Anaesthe*. 2020; 75(2):227-233. doi:10.1111/anae.14747
4. Romanov K, Nevgi A. Do medical students watch video clips in eLearning and do these facilitate learning? *Med Teach*. 2007;29(5):484-488. doi:10.1080/01421590701542119
5. Staunton PF, Baker JF, Green J, Devitt A. Online curves: a quality analysis of scoliosis videos on YouTube. *Spine (Phila Pa 1976)*. 2015;40(23):1857-1861. doi:10.1097/BRS.0000000000001137
6. Yildirim B, Basaran O, Alatas OD, et al. Chest tube insertion techniques on YouTube: is social media a reliable source of learning medical skills? *Am J Emerg Med*. 2015;33(11):1709-1710. doi:10.1016/j.ajem.2015.08.040
7. Mueller SM, Jungo P, Cajacob L, Schwegler S, Itin P, Brandt O. The absence of evidence is evidence of non-sense: cross-sectional study on the quality of psoriasis-related videos on YouTube and their reception by health seekers. *J. Med. Int*. 2019;21(1):e11935. doi:10.2196/11935
8. Satıcı MH. Evaluation of YouTube videos for learning interfascial plane blocks. *Med Records*. 2024;6(3):317-323. doi:10.37990/medr.1475153
9. Satıcı MH, Tutar MS. Analyzing the educational quality of YouTube videos on paravertebral block techniques. *CJPM*. 2024;2(2):43-54. doi:10.20528/cjpm.2024.02.003
10. Cho NR, Cha JH, Park JJ, Kim YH, Ko DS. Reliability and quality of YouTube videos on ultrasound-guided brachial plexus block: a programmatic review. *In Healthcare*. 2021;9(8):1083. doi:10.3390/healthcare9081083

11. Selvi O, Tulgar S, Senturk O, Topcu DI, Ozer Z. YouTube as an informational source for brachial plexus blocks: evaluation of content and educational value. *Rev Bras Anesthesiol.* 2019;69(2):168-176. doi:10.1016/j.bjan.2018.11.004
12. Turhan S, Ekici AA. YouTube as an information source of transversus abdominis plane block. *Turk J Clin Lab.* 2023;12(2):216-221. doi:10.18663/tjcl.1272291
13. De Cassai A, Correale C, Sandei L, Ban I, Selvi O, Tulgar S. Quality of erector spinae plane block educational videos on a popular video-sharing platform. *Cureus.* 2019;11(3):e4204. doi:10.7759/cureus.4204
14. Tulgar S, Selvi O, Serifsoy TE, Senturk O, Ozer Z. YouTube as an information source of spinal anesthesia, epidural anesthesia and combined spinal and epidural anesthesia. *Rev Bras Anesthesiol.* 2017;67(5):493-499. doi:10.1016/j.bjan.2016.08.007
15. National Career Development Association (NCDA) guidelines for the preparation and evaluation of video career media. (2019). Accessed: 18.02.2019: <https://www.ncda.org/aws/NCDA/asset manager/getfile/340>.
16. Arslan B, Sugur T, Ciloglu O, Arslan A, Acik V. A cross-sectional study analyzing the quality of YouTube videos as a source of information for COVID-19 intubation. *Braz J Anesthesiol.* 2022;72(2):302-305. doi:10.1016/j.bjane.2021.10.002
17. Gonzalez-Estrada A, Cuervo-Pardo L, Ghosh B, et al. Popular on YouTube: a critical appraisal of the educational quality of information regarding asthma. *Allergy Asthma Proc.* 2015;36(6):121-126. doi:10.2500/aap.2015.36.3890
18. Turhan VB, Ünsal A. Evaluation of the quality of videos on hemorrhoidal disease on YouTube™. *Turk J Colorectal Dis.* 2021;31(3):261-267. doi:10.4274/tjcd.galenos.2021.2021-1-4
19. Tewfik GL, Work AN, Shulman SM, Discepola P. Objective validation of YouTube™ educational videos for the instruction of regional anesthesia nerve blocks: a novel approach. *BMC Anesthesiol.* 2020;20(1):1-7. doi:10.1186/s12871-020-01084-w
20. Nason K, Donnelly A, Duncan HF. YouTube as a patient-information source for root canal treatment. *Int Endod J.* 2016;49(12):1194-1200. doi:10.1111/iej.12575
21. Tackett S, Slinn K, Marshall T, Gaglani S, Waldman V, Desai R. Medical education videos for the world. An analysis of viewing patterns for a YouTube channel. *Acad Med.* 2018;93(8):1150-1156. doi:10.1097/ACM.0000000000002118