

Educational Quality of Youtube and TikTok Content on Radiofrequency Ablation

Vasanth Selvam¹ DO, Leyla Nasr² BS, Nivetha Srinivasan³ MD, Manish Mammen¹ MD

Mercy Hospital¹, New York Institute of Technology College of Osteopathic Medicine², Rutgers New Jersey Medical School³



INTRODUCTION

- Radiofrequency ablation (RFA) is an interventional treatment for alleviating discomfort from spine and joint conditions, including lower back and knee pain
- In an increasingly digitalized society, both medical professionals and the public rely on platforms such as YouTube and TikTok for health-related information
- However, concerns persist regarding the quality and reliability of RFA-related content on these platforms

STUDY GOAL

This study aims to systematically evaluate the credibility and content of YouTube and TikTok videos concerning RFA.

METHODOLOGY

- A comprehensive search was conducted on YouTube and TikTok in July 2025, using the keywords "Radiofrequency Ablation" and "RFA."
- Video demographics, including platform, duration, likes, comments,views, profession, gender, subtitles and theme of the video(educational or anecdotal) were documented.
- The quality and reliability of the video content were assessed using established tools, namely the Modified DISCERN (mDISCERN), Journal of American Medical Association (JAMA) benchmarks, and Global Quality Scale (GQS).
- Statistical analyses, including two-sample T-tests, Chi-Square tests, and mean comparisons, were performed to compare the platforms and assess the content.

Table 1: Social Media Engagement Metrics (YouTube vs TikTok)

Table 1. Social Media Engagement Metrics (YouTube vs TikTok)			
Parameters	YouTube	TikTok	P-Value
Duration	274.1 ± 197.9	88.0 ± 75.3	<0.0001
Views	58,212.8 ± 116,183.5	51,394.4 ± 286,508.8	0.15
Likes	295.0 ± 488.2	485.6 ± 200.3	0.236
Comments	57.6 ± 143.3	32.8 ± 52	0.154
Followers	54499.7 ± 200650.4	102661.1 ± 200898.9	0.198

Table 2: Comparison of Scoring Assessments Across YouTube and TikTok Platforms

Table 2: Comparison of Scoring Assessments Across YouTube and TikTok Platforms			
Scoring Assessments	Youtube	TikTok	P-Value
mDISCERN	3.0 ± 1.0	2.3 ± 0.8	<0.0001
JAMA	2.6 ± 0.91	2.0 ± 0.9	0.0033
Global Quality Scale	3.8 ± 0.9	2.8 ± 1.0	<0.0001

Table 3: Comparative Analysis of Video Content Characteristics on YouTube and TikTok

Table 3: Comparative Analysis of Video Content Characteristics on YouTube and TikTok				
Parameter		YouTube	TikTok	p value
Professional		71 (87.7%)	40(67.8%)	0.004
Nonprofessional		10 (12.3%)	19 (32.2%)	0.215
Gender	No People	4 (4.9%)	0	0.073
	Male	60 (73.0%)	36 (62.7%)	
	Female	17 (20.9%)	22 (37.3%)	
Animation		19 (23.5%)	8 (13.6%)	0.143
Subtitle		71 (87.7%)	33 (56%)	<0.001
Educational		70 (86.4%)	38 (64.4%)	0.002
Anecdotal		15 (18.5%)	17 (28.8%)	0.152

RESULTS

- The analysis of video data revealed that YouTube videos (mean duration: 274.1 ± 197.9 sec) were significantly longer than TikTok videos (mean duration: 88.0 ± 75.3 sec, p < 0.05).
- No significant differences were observed between YouTube and TikTok in terms of views (p = 0.15), likes (p = 0.24), or comments (p = 0.15) (Table 1)
- YouTube videos demonstrated significantly higher quality and reliability (p < 0.05) compared to TikTok, as measured by the mDISCERN (YouTube: 3.0 ± 1.0; TikTok: 2.3 ± 0.8), JAMA benchmarks (YouTube: 2.6 ± 1.0; TikTok: 2.0 ± 0.9), and GQS (YouTube: 3.8 ± 0.9; TikTok: 2.8 ± 1.0) (Table 2).
- Additionally, YouTube content had a significantly higher proportion of videos produced by healthcare professionals (87.7%) compared to TikTok (67.8%) and included a greater proportion of educational material (86.4% vs. 64.4%)(Table 3).

CONCLUSION

- YouTube outperformed TikTok in credibility and informative content, but the overall quality scores remained average, highlighting the need for higher-quality videos on both platforms.
- These results emphasize the importance of providing high-quality content to enhance public understanding of RFA as a pain management technique.

REFERENCES

1. Wray JK, Dixon B, Przkora R. Radiofrequency Ablation. [Updated 2023 Jun 12]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK482387/>
2. Kanchan S, Gaidhane A. Social Media Role and Its Impact on Public Health: A Narrative Review. Cureus. 2023 Jan 13;15(1):e33737. doi: 10.7759/cureus.33737. PMID: 36793805; PMCID: PMC9925030.
3. Merga, M. K. (2024). TikTok and digital health literacy: A systematic review. *IFLA Journal*, 51(2), 490-501. <https://doi.org/10.1177/03400352241286175> (Original work published 2025)