Quality Assessment of YouTube Content on SLAP Tears

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Disclosures

- Arthrex, Inc

- Committee/Board
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  - AANA
  - RJOS
  - ISAKOS

Introduction

- Superior labrum anterior to posterior (SLAP) lesions are tears of the superior labrum in the superior quadrant of the glenoid, that then translate anterior to posterior.
- SLAP lesions can occur as the result of acute repetitive overhead motion, as seen in overhead athletes and manual laborers [1]
- YouTube, the second largest social media platform with over 2 billion views per day, has increasingly become a source that patients use for medical information due to its easy access and format [2]
- **Purpose: to assess the quality of YouTube videos related to the diagnosis and treatment of SLAP tears**

Methods

- Systematic search using keywords "SLAP tear" or "superior labral tear" on www.youtube.com on using the search filter 'Relevance' in Incognito mode.
- First 50 videos were recorded, evaluated for inclusion, and classified into categories according to their source and content
- **Video source** was classified into 7 categories: (1) academic (uploads affiliated with research groups or universities), (2) physician (independent physicians without direct affiliations with a research/ university group), (3) non-physician (e.g., physical therapist), (4) athletic trainer (e.g., demonstrating exercises), (5) medical source (animation or content from a health education website), (6) patient experience, (7) commercial.
- **Content** was divided into 6 categories: (1) rehabilitation/ physical therapy, (2) pathology/pathoanatomy, (3) patient experience, (4) surgical technique/approach, (5) nonsurgical management, and (6) advertisement.

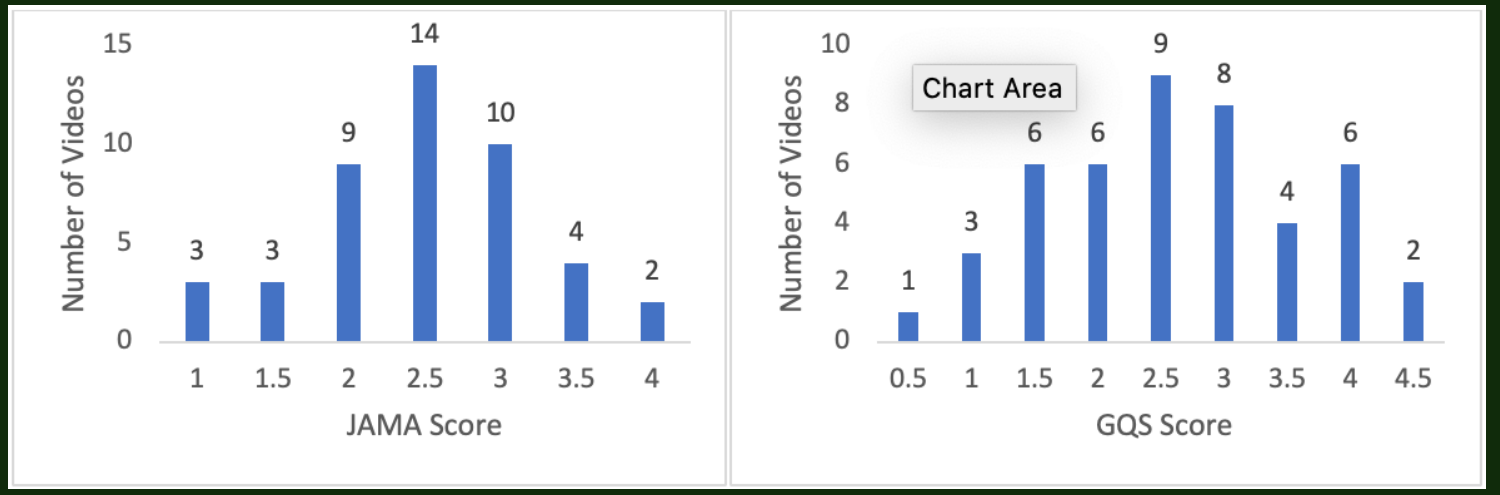
Methods

- The first 50 videos were analyzed by two independent reviewers and scored using 3 scoring systems: **Global Quality Scale (GQS)**, the **Journal of the American Medical Association (JAMA),** and the **Shoulder Specific Score (SSS)** to determine video accuracy and reliability.
- Kruskal Wallis used to compare quality scores and video analytics with their determined category
- Statistical significance of <0.05
- Pearson Correlation coefficient was used to determine the correlation

Results

Scores of most videos were low

- JAMA score : 2.5 (1–4, SD 0.73)
- GQS of 2.66 (0.5–4.5, SD 0.99)
- SSS of 7.13 (0–18, SD 4.39)



Videos Per JAMA Score and GQS Score

Results

There were *significantly higher* mean scores for JAMA, GQS, and SSS in **the academic and independent physician categories**

Academic Source

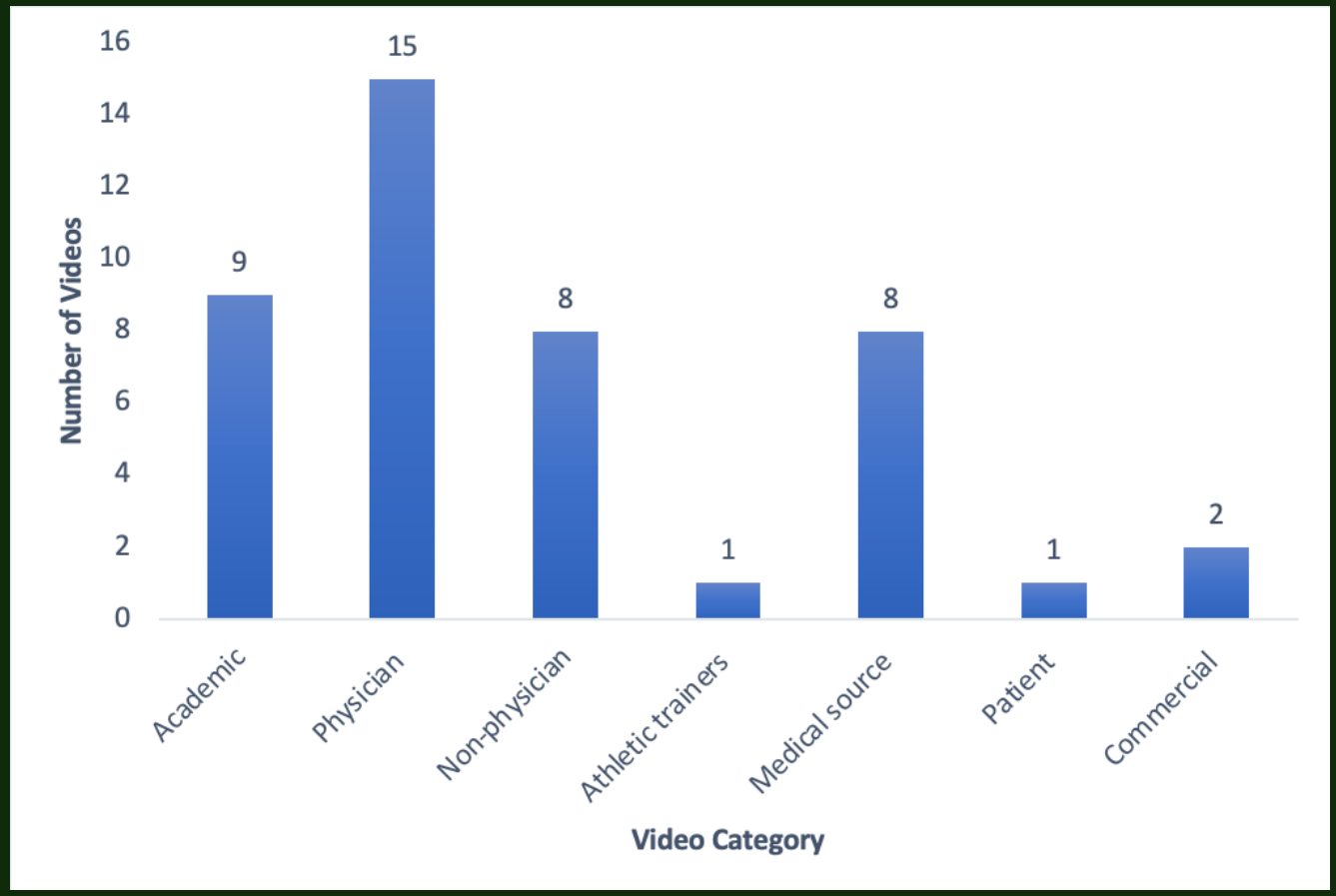
- JAMA score: 3.11
- GQS score: 3.39
- SSS score: 11.0

Independent Physicians

- JAMA score of 2.83
- GQS score of 3.23
- SSS score of 9.23

Results

Only 34% of videos were uploaded by physicians



Results

- JAMA score was significantly and positively correlated with video duration ($r = 0.405$, $p = 0.006$)

- No correlation between video quality and number of views

Variable	All Videos (n=44)	Academic (n=9)	Independent Physician (n=15)	Non-physician (n=8)	Athletic Trainer (n=1)	Medical Source (n=8)	Patient (n=1)	Commercial (n=2)
JAMA benchmark, (SD)	2.50 (0.73)	3.11 (0.54)	2.83 (0.52)	2.00 (0.46)	1.50	2.13 (0.64)	2.50	1.25 (0.35)
GQS, (SD)	2.66 (0.99)	3.39 (0.69)	3.23 (0.75)	1.875 (0.83)	2.50	1.69 (0.59)	3.00	2.00 (0)
SSS, (SD)	7.12 (4.32)	11.00 (4.29)	9.23 (3.02)	4.1875 (1.93)	3.50	3.56 (3.14)	4.00	3.25 (2.48)
Days since upload, (SD)	2009.00 (1234)	2245.00 (1412.19)	2107.47 (1198.32)	1843.25 (1429.78)	3090.00	1251.38 (915.1)	1.00	3070.50 (40.3)
No. of Views, n (SD)	71137.00 (103991.00)	101244.22 (171600.16)	60236.46 (95079.26)	69321.25 (71382.03)	207773.00	51656.63 (63999.51)	36850.00	51424.50 (70086.31)
Duration, s (SD)	343.00 (277)	369.00 (362.15)	418.6 (315.10)	346.38 (196.89)	132.00	238.63 (222.11)	268.00	208.50 (3.53)
Video Power Index (VPI), (SD)	33.50 (35.90)	30.38 (39.47)	24.52 (23.67)	48.84 (40.89)	65.85	40.46 (48.83)	10.72	15.69 (21.31)

Mean and Standard Deviation JAMA, GQS, SSS, Upload Date, Views, Duration and VPI Values of the Videos Based on Source and Content.

Conclusion

- YouTube videos on the diagnosis and management of SLAP tears have low overall quality and reliability scores
- Only approximately *half* of the YouTube videos that resulted from our search were from orthopaedic surgeons and the content available did not provide high quality information for patients
- This study demonstrates an opportunity for orthopaedic surgeons to provide informational resources of their own, so patients can make well-informed decisions regarding their care

Key References

1. Varacallo M, Tapscott D, Mair S. Superior Labrum Anterior Posterior Lesions. StatPearls Publishing; 2019.

2. Madathil K, Rivera-Rodriguez A, Greenstein J, Gramopadhye A. Healthcare information on YouTube: a systematic review. Health Informatics J. 2015;21(3):173–94.

Thank you

Please contact us with any questions

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