

Virality vs Veracity: Analyzing TikTok Engagement & Misinformation on Aneuploidy Screening & Diagnosis in Pregnancy

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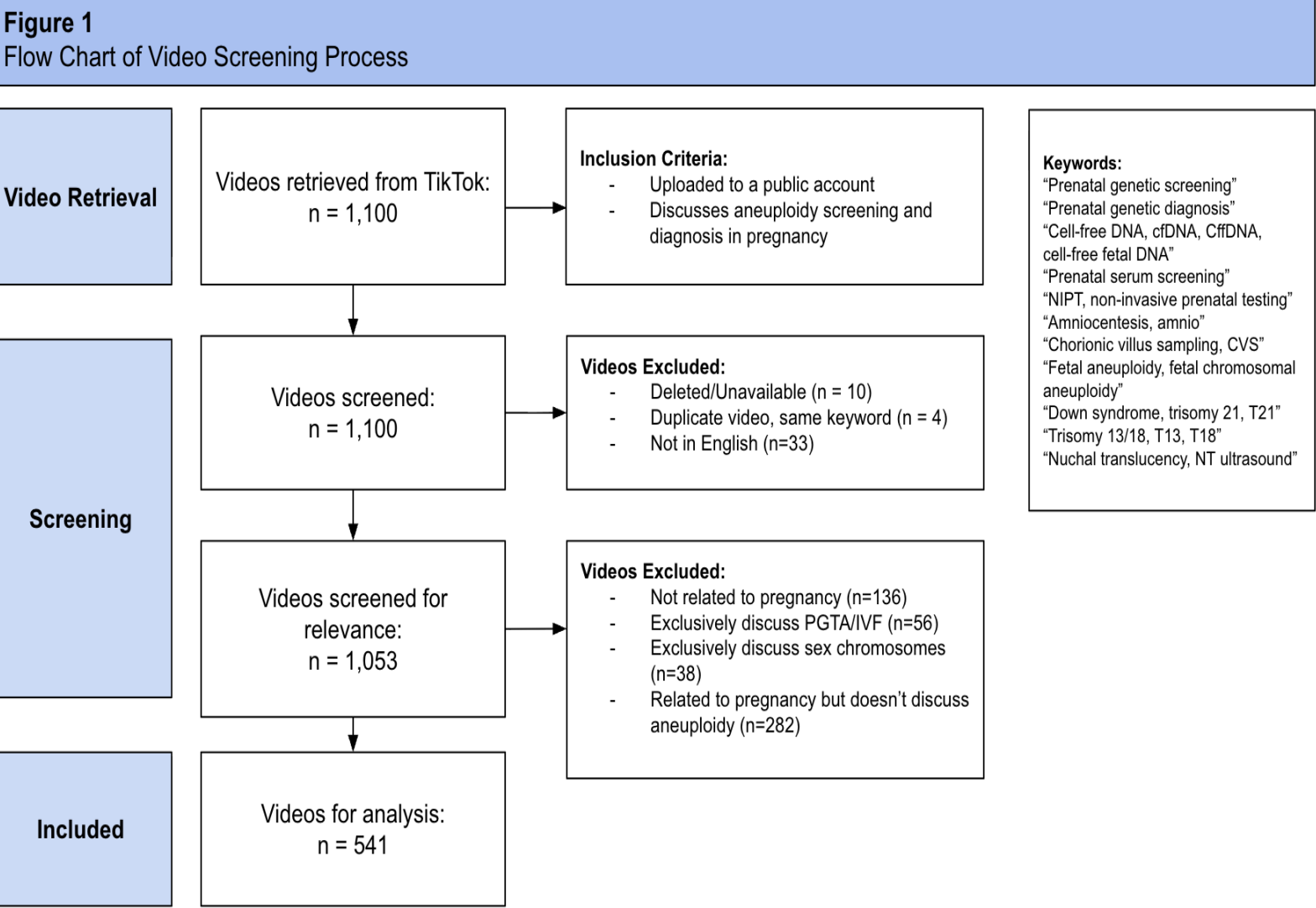


Introduction

Pregnant people are increasingly utilizing TikTok to access medical information. However, the accuracy and reliability of this content remain largely unexamined. This study aimed to evaluate videos on prenatal aneuploidy testing by engagement, reliability, and quality, comparing results by content category and account type.

Methods

- 11 searches with 11 sets of keywords related to prenatal aneuploidy testing
- The first 100 videos for each search were collected
- Videos categorized based on account and content type
- Engagement metrics collected from TikTok
- mDISCERN criteria to assess reliability
- Global Quality Scale (GQS) to assess quality
- Engagement metrics, mDISCERN, GQS compared across video category and account type

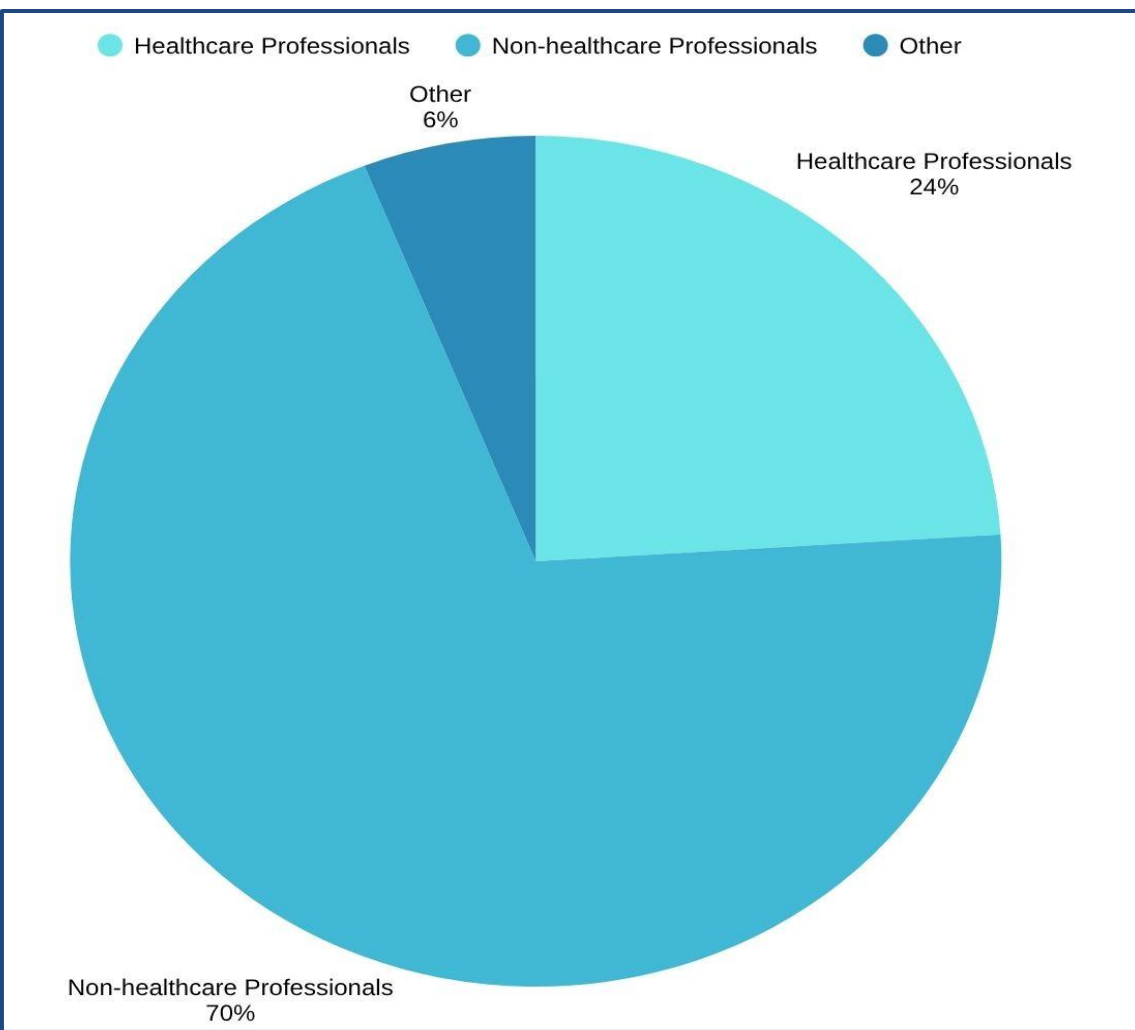


Results

Descriptive Statistics of Video Pool

- 541 videos included in the analysis
- Videos had a median:
 - 30,500 views, 378 likes, 38 comments.
- The median mDISCERN was 3.5 out of 14 (Q1 2.5, Q3 6)
- The median GQS was 2.5 out of 5 (Q1 2, Q3 3)
- Distribution of videos by account is shown in Figure 1
 - Majority of videos were posted by non-healthcare professionals.**
- Distribution of videos by category is shown in Table 1
 - The largest video category was patient experience/testimonial.**

Figure 2
Distribution of Videos by Account



Comparing Quality, Reliability and Engagement

- Healthcare professional videos had **significantly higher mDISCERN and GQS scores** compared to non-healthcare professionals.
- Non-healthcare professionals had **significantly higher views** than non healthcare professionals.
- Fear mongering videos had the highest comments, likes and views
- The **lowest reliability** categories include humorous and crowdsourcing
- The **lowest quality** categories include pro-life messaging, crowdsourcing and fear mongering

Table 1
Distribution of Videos by Category

Variables	Video Category						
	Educational	Patient experience/testimonial	Advertising products or services	Pro life messaging	Fear mongering	Humorous	Crowd-sourcing
Distribution	39.0%	74.3%	2.8%	4.6%	3.7%	3.3%	10.5%

Table 2
Comparing Reliability, Quality and Engagement

Variables	Video Category							Account Type		
	Educational	Patient experience/testimonial	Advertising products or services	Pro life messaging	Fear mongering	Humorous	Crowd-sourcing	Healthcare professional	Non-healthcare professional	Wilcoxon rank-sum p-value
Reliability Median (Q1, Q3) mDISCERN	7.5 (6.8,8)	3 (2,4)	7 (7,7)	3 (3,3)	3.8 (3.4,4.1)	1 (1,1)	1.5 (1.5,2)	8 (7,9)	3 (2,4)	<0.01*
Quality Median (Q1, Q3) GQS	3.5 (3,4)	2 (1.9,2)	3.5 (3.5,3.5)	1 (1,1)	2 (1.8,2.3)	1 (1,1)	1.5 (1.5,2)	3.5 (3,4)	2 (1.5,2.5)	<0.01*
Engagement Median (Q1, Q3)										
Total Comments	30 (9,77)	40 (15,164)	70 (4,73)	30 (7,256)	75 (10,184)	69 (27,162)	142 (39,435)	38 (13,111)	43 (15,166)	0.18
Total Likes	274 (82,1029)	455 (132,1650)	360 (80,1826)	339 (152,3624)	810 (120,2258)	557 (75,1078)	810 (93,2184)	243 (83,966)	461 (133,1800)	0.15
Total Views	30200 (9479, 65900)	31700 (10100, 105600)	27900 (4496, 160400)	11050 (5504, 178650)	42800 (18200, 135300)	40000 (89600)	47900 (134800)	28900 (55200)	32150 (10225, 109200)	<0.01*

Conclusions

TikTok provides low quality and unreliable medical information on prenatal aneuploidy testing.

- Healthcare professionals' videos are higher in quality and reliability but have lower views than those by non-healthcare professionals.
- Fear mongering videos, posted mainly by non-healthcare professionals, had the highest engagement metrics.
- These findings highlight the need for strategies to improve the reach of accurate, evidence-based prenatal information on social media platforms.

Future Directions

- Does the information patients learn on TikTok influence decision making in any meaningful way?
- Investigate the accuracy and reliability of videos on carrier screening

References

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