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Quality and Reliability Assessment of Turkish YouTube Videos Related to Polycystic Ovary Syndrome: A Cross-Sectional Study

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ABSTRACT

Purpose: The aim of this study is to evaluate the content quality and reliability of information shared in Turkish YouTube videos about polycystic ovary syndrome (PCOS).

Methods: In May 2025, a search was conducted on the YouTube platform using the keywords "PCOS," "polycystic ovary treatment," and "what is PCOS." The top 100 most-viewed videos from each search were recorded, and after removing duplicate and exclusion criteria-meeting videos, 144 unique videos were included in the analysis. The overall quality of the videos was assessed using the global quality scale (GQS), and the level of reliability was assessed using the modified DISCERN (mDISCERN) scale. Mann-Whitney U and Kruskal-Wallis tests were used in the statistical analysis.

Results: 84.0% of the videos (n=121) were classified as useful, and 16.0% (n=23) were classified as misleading. The median GQS and mDISCERN scores of useful videos were significantly higher than those of misleading videos, mDISCERN ($p<0.001$). The median duration of useful videos (6.8 minutes) was longer than that of misleading videos (2.3 minutes) ($p=0.003$). However, the median number of views for misleading videos was significantly higher than that for useful videos ($p=0.041$). While 65.3% of the videos were uploaded by physicians, 34.8% of the misleading videos were shared by patients or influencers.

Conclusion: The popularity of misleading content increases the risk of patients being exposed to misinformation. There is a need to increase scientifically accurate content on digital platforms and improve digital health literacy.

Keywords: Digital health, GQS, DISCERN, polycystic ovary syndrome, YouTube

INTRODUCTION

Polycystic ovary syndrome (PCOS) is the most common endocrine disorder affecting women of reproductive age, with an estimated global prevalence of 6-13%.[1] PCOS may present with a heterogeneous clinical picture defined by the presence of at least two of the following findings, based on the Rotterdam criteria, revised in 2003: oligo-ovulation; hyperandrogenism (clinical and/or biochemical); and polycystic ovary morphology on ultrasound.[2,3] PCOS not only causes reproductive health problems, such as irregular menstrual cycles, infertility, and hirsutism, but is also a significant risk factor for serious metabolic complications, such as insulin resistance, type 2 diabetes, dyslipidemia, obesity, and cardiovascular disease.[4,5] Its complex and chronic nature necessitates lifelong management and follow-up for patients, and it is estimated that nearly 70% of affected women remain undiagnosed.

The internet and social media have become the primary sources individuals turn to when seeking health-related information.[6] YouTube, a video-based social media platform, has become a popular source of information for patients because of its ability to present complex health topics in a simplified visual and auditory format.[7] However, the majority of content on YouTube is published without undergoing any scientific or peer review process raises concerns about the quality and reliability of the information on the platform.[8,9] In conditions such as PCOS, where management relies heavily on lifestyle changes and patient education, patients' access to accurate, reliable, and up-to-date information has a direct impact on their treatment compliance and health outcomes. Incorrect or incomplete information can lead patients to ineffective or potentially harmful treatments, cause health anxiety, and damage the physician-patient relationship.[10] Therefore, the aim of this study was to systematically evaluate the content quality, reliability, and demographic

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characteristics of information shared in Turkish YouTube videos about PCOS.

METHODS

Ethical Approval

This study was conducted as a content analysis of videos published on YouTube, a publicly accessible digital platform. It did not involve human or animal subjects, did not collect personal data, and used an observational method. Therefore, it did not require ethical committee approval. This study was conducted in accordance with the principles of the Declaration of Helsinki.

This cross-sectional study was conducted on the YouTube platform in May 2025. The search was performed using three different Turkish keywords: "polikistik over sendromu (polycystic ovary syndrome)," "polikistik over tedavisi (polycystic ovary treatment)," and "PCOS nedir? (what is PCOS)" using the default "relevance" filter, the top 100 most-viewed videos for each search (300 videos in total) were recorded.

After removing duplicate videos (n=122), the remaining 178 unique videos were reviewed according to exclusion criteria. Videos not in Turkish (n=34) were excluded from the analysis. At the end of this process, 144 videos were included in the study (Figure 1).

For each video, data such as duration, number of views, number of likes, upload date, uploader type (physician, university/institution, media organization, patient/influencer), and target audience (patient, healthcare professional) were recorded in an electronic spreadsheet.

Video Evaluation Scales

The quality and reliability of the videos were assessed by a gynecologist (Ç.A) using the following scales. To ensure the reliability of the assessment, a second gynecologist (M.B) independently reviewed all videos and confirmed this assessment. For videos in which the two evaluators disagreed, a consensus meeting was held to reach a final decision. The scales used are described below.

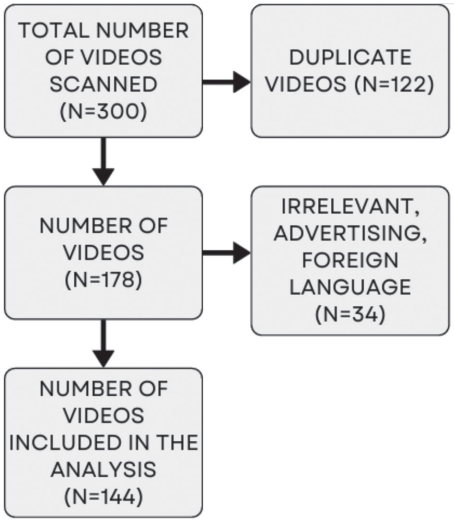

Figure 1. Flowchart for selecting videos included in the study

Global Quality Scale

The global quality scale (GQS) is a 5-point Likert scale measuring the overall fluency, accuracy of information, and educational value of the videos.[11] Each video was scored on a scale of 1-5 according to the following criteria:

1 point: Low quality, contains misleading or incorrect information,

2 points: Generally low quality, contains limited information,

3 points: Moderate quality, contains some useful information but has shortcomings,

4 points: Good quality, mostly accurate and useful information,

5 points: Excellent quality, provides comprehensive, accurate, and balanced information.

Modified DISCERN

The modified DISCERN (mDISCERN) is a measure developed to assess the reliability of health information.[11] This scale allows for a total score of 0-5 to be obtained by evaluating each of the following five criteria as "yes" (1 point) or "no" (0 points):

- Are the information sources clear and reliable?
- Is the information presented balanced and unbiased?
- Are additional information sources or references provided?
- Are areas of uncertainty or controversial topics addressed objectively?
- Are treatment options clearly explained, along with their risks and benefits?

Video Classification

As a result of the evaluation, videos were divided into two groups based on their GQS and mDISCERN scores:

- Useful videos: GQS ≥3 and mDISCERN ≥3 (both criteria must be met)
- Misleading videos: GQS <3 or mDISCERN <3 (failing to meet one criterion was sufficient)

This classification, consistent with similar studies in the literature, considers quality and reliability scores above the mid-range to be "useful".[12,13]

Statistical Analysis

Statistical analyses were performed using SPSS, version 27.0 (IBM Inc., Armonk, NY, USA). Continuous variables are presented as medians (minimum-maximum), and categorical variables are presented as numbers and percentages (%). The Mann-Whitney U test was used to compare two independent groups, and the Kruskal-Wallis test was used to compare more than two groups. Statistical significance was set at $p<0.05$.

RESULTS

The details and quality characteristics of the 144 videos included in this study are summarized in Table 1. Of the videos 84.0% (n=121) were classified as useful, while 16.0% (n=23) were classified as misleading.

The median GQS score of videos classified as useful [3.9 (3-5)] was found to be statistically significantly higher than that of misleading videos [2.7 (2-3)] ($p<0.001$). Similarly, the median mDISCERN score of useful videos [3.6 (2-5)] was significantly higher than the median score of misleading videos [1.8 (1-2)] ($p<0.001$).

The median duration of useful videos was significantly longer at 6.8 min compared to the median duration of misleading videos at 2.3 min ($p=0.003$). In contrast, the median number of views for misleading videos (3,720) was significantly higher than the median number of views for useful videos (1,580) ($p=0.041$) (Table 1).

Regarding the sources of the videos, 65.3% of the videos were uploaded by physicians, 6.3% by universities/institutions, 11.2% by media organizations, and 17.4% by patients or social media content creators. When quality scores were examined according to uploader source, videos uploaded by physicians and universities had significantly higher GQS and mDISCERN scores than those uploaded by patients and influencers ($p=0.024$).

Content analysis showed that videos most frequently addressed treatment options (50.0%), definitions and general information (34.0%), and diet/lifestyle recommendations (25.0%) (Table 2).

DISCUSSION

This study presents a comprehensive analysis evaluating the quality and reliability of videos about PCOS available on Turkish YouTube. Our findings reveal that the majority of videos on the platform (84%) generally contain useful information, but a significant minority (16%) are misleading or of low quality. A more concerning finding was that videos with low-quality and misleading content were significantly more popular than high-quality and useful videos (Table 1). This suggests that patients and individuals seeking information are at risk of being exposed to popular content that lacks scientific accuracy.

Our study found a strong correlation between video quality and source. Videos produced by physicians and academic institutions scored highest on both the GQS and mDISCERN scales, emerging as the most reliable sources of information. In contrast, content created by patients or "influencers" had significantly lower quality scores and a higher likelihood of containing misleading information. These results are consistent with those of other studies. For example, studies examining YouTube videos on various medical conditions such as endometriosis,[12] gestational diabetes,[13] cervical cancer,[14] and rheumatoid arthritis[15] similarly reported that content produced by healthcare professionals was of higher quality and reliability, while videos based on personal experiences or commercial purposes were generally misleading and of lower quality.[16,17]

The finding that misleading videos tend to be shorter and have higher view counts can be explained by modern digital content consumption habits. Users often gravitate toward information that is quick, has been viewed by many other people, is visually appealing, and easy to understand.[18]

Table 1. Quality and reliability characteristics of videos

Variable	Useful (n=121)	Misleading (n=23)	*p* value
Duration (minutes)	6.8 (0.9-28.2)	2.3 (0.6-7.4)	0.003
Views (number)	1,580 (45-200,000)	3,720 (500-42,000)	0.04
GQS score	3.9 (3-5)	2.7 (2-3)	<0.001
DISCERN score	3.6 (2-5)	1.8 (1-2)	<0.00
Uploading source (doctor/patient)	65.3%/11.7	17.4%/34.8	0.024

GQS: Global quality scale

Table 2. Content distribution of YouTube videos

Content heading	N (%)
Definition and general information	49 (34.0)
Symptoms and signs	29 (20.1)
Risk factors	25 (17.4)
Diagnostic methods	24 (16.7)
Treatment options	72 (50.0)
Diet and lifestyle recommendations	36 (25.0)
Infertility relationship	20 (13.9)
Complications	8 (5.6)
Personal experience/vlog	6 (4.2)

However, this can lead to the oversimplification of complex and chronic conditions, such as PCOS, and the omission of important details, resulting in misunderstandings. For example, short videos that focus solely on "cysts" or offer unproven "miracle cures" may negatively impact patients' health management by disregarding the syndrome's metabolic and long-term risks.

The findings of this study are consistent with those of Bakkaloğlu et al.[19] who compared YouTube and Instagram reels content related to PCOS. Both studies show that content produced by healthcare professionals is more reliable, but popularity is not always proportional to quality. This situation emphasizes the importance of digital health literacy. It is important for patients to be able to question the source, purpose, and evidence-based nature of online health information.[20] Thus patients need to be educated and cautioned by healthcare professionals about potentially poor quality infomation available online.

Study Limitations

This study had some limitations. Only the YouTube platform was examined; other popular social media channels such as TikTok and Instagram were not included. Furthermore, as popularity rankings at the time of search may change over time, the results reflect a snapshot of the situation. Although two gynecologists independently assessed the videos, the primary evaluation was conducted by one researcher (Ç.A), with the second evaluator (M.B) performing confirmatory reassessment rather than fully independent blinded scoring. A more robust methodology would have involved two obstetricians independently watching and scoring all videos without knowledge of each other's assessments. Furthermore, while social media content regulation for healthcare professionals exists, monitoring content uploaded by non-professional users remains challenging. Future research could explore whether healthcare professionals uploading high-quality videos in shorter segments with varied verbal and visual materials might help accurate content reach wider audiences and compete with misleading short videos. Finally, we did not analyze viewer comments on frequently viewed low-quality videos, which could provide valuable insights into how audiences interpret and respond to misleading health information. However, a strength of our study is that a large pool of videos (n=144) was evaluated using systematic and validated scales.

CONCLUSION

The Turkish YouTube platform has the potential to be a valuable resource for patients seeking information about PCOS but it contains significant differences in terms of content quality and reliability. The high popularity of misleading and low-quality videos poses a risk to public health. Therefore, physicians, healthcare institutions, and scientific associations should be encouraged to play a more active role on social media by producing evidence-based, understandable, and engaging content. Furthermore, it is critically important to develop educational programs aimed at improving patients' digital health literacy and raising awareness of how to distinguish reliable sources of information.

Ethics

Ethics Committee Approval: The study material was obtained from publicly available YouTube content and does not require ethics committee approval as it does not involve individual intervention or contain identifying data.

Informed Consent: Informed consent was not required due to the use of publicly available YouTube content.

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Footnotes

A Turkish abstract version of this study was presented as an oral presentation at the 2nd Aegean Women's Health Congress, held on October 25-26, 2025, in İzmir, Turkey.

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