Duzce Medical Journal

2026;28(1):77-83
https://doi.org/10.18678/dtfd.1838760

e-ISSN: 1307-671X
https://dergipark.org.tr/en/pub/dtfd

Research Article

Evaluation of YouTube Videos as a Source for Urinary Incontinence Exercises

Nurten Nas Kırdar[1*], Mehmet Kırdar[2], Emine Aydın[3], Naime Meriç Konar Erol[4]

[1] Department of Physical Medicine and Rehabilitation, Bandırma Onyedi Eylül University, Faculty of Medicine, Balıkesir, Türkiye.
ror.org/02mtr7g38

[2] Department of Urology, Bandırma Training and Research Hospital, Balıkesir, Türkiye.

[3] Department of Physical Medicine and Rehabilitation, Eskişehir City Hospital, Eskişehir, Türkiye.
ror.org/00czdkn85

[4] Department of Biostatistics and Medical Informatics, Bandirma Onyedi Eylül University, Faculty of Medicine, Balıkesir, Türkiye.
ror.org/02mtr7g38

*Corresponding author:
nrtnns@gmail.com

Received: 10.12.2025
Revision: 14.04.2026
Accepted: 15.04.2026
Online: 25.04.2026

ABSTRACT

Aim: This study aimed to investigate the accuracy, adequacy, and reliability of YouTube videos concerning urinary incontinence exercises.

Material and Methods: YouTube was searched with the keywords 'urinary incontinence exercises' and 'urinary incontinence exercise treatment'. 245 videos met the inclusion criteria and were included. These videos were evaluated by two physicians. The evaluation parameters were as follows: numerical parameters, modified DISCERN questionnaire (mDISCERN), Journal of the American Medical Association (JAMA) Benchmark Criteria, Global Quality Score (GQS). The video was also evaluated to see if the exercises were shown correctly.

Results: The majority of videos were uploaded from the USA (n=97, 39.6%), and the source was mostly from non-healthcare workers (n=99, 40.4%). Exercises were shown correctly in 154 (62.9%) videos. Videos created by doctors had significantly higher view count (p=0.015), video duration (p<0.001), number of comments (p<0.001), GQS (p=0.003), and mDISCERN score (p=0.004) compared to others. The JAMA score was higher in videos created by doctors and physiotherapists than in the others (p<0.001). The videos where the exercises were shown correctly had higher GQS (p<0.001), JAMA (p=0.010), and mDISCERN (p=0.019) scores compared to the videos where the exercises were not shown correctly.

Conclusion: The majority of the YouTube videos evaluated in this study were found to be of intermediate quality according to the GQS score, and partly sufficient according to the JAMA score. It is thought that videos explained by a doctor and showing the exercises correctly may be more beneficial for patients.

Keywords: Information reliability, pelvic floor exercises, social media use, urinary incontinence exercises, YouTube.

INTRODUCTION

In recent years, there has been a significant increase in internet usage across almost every field (1). The use of social media (YouTube, Instagram, Facebook, Twitter) related to diseases has increased in the field of health. While patients sometimes create videos to share their experiences about diseases, sometimes experts create videos for informational purposes. Although the reliability and usefulness of these contents are issues that need to be discussed separately, we can accept that they are at least partially useful for patients who do not have the opportunity to reach a hospital or a specialist. There are many studies on this subject in the field of health, related to various diseases (2,3).

Urinary incontinence has become a common condition with age, especially in women. Urinary incontinence, defined as involuntary urine leakage, is a common and disturbing condition that negatively affects quality of life (4). Some complaints, such as urinary incontinence, are complaints that patients have difficulty expressing and are hesitant to go to the doctor. In such cases, patients try to solve this problem without going to the doctor or through social media.

Several scientific studies have been conducted evaluating social media resources related to urinary incontinence. A study examining YouTube videos on urinary incontinence concluded that higher quality resources are needed (5). On the other hand, various studies evaluating videos on urinary incontinence after prostate cancer surgery and pelvic surgery have concluded that these videos are of high quality and beneficial for patients (6,7). In a 2012 study evaluating videos of pelvic floor muscle exercises, Stephen and Cumming (8) concluded that YouTube is increasingly used to access information, that there is no formal structure for quality control, and that more research is needed to establish appropriate protocols.

This study aimed to examine the reliability, adequacy and accuracy of YouTube videos regarding urinary incontinence exercises. The difference of our study from previous studies will be that we will evaluate the videos that have been updated recently, when internet usage has increased, and we will examine whether the visual representation of the exercises in the video has an effect on the content quality.

MATERIAL AND METHODS

Study Design

This study was designed as a cross-sectional descriptive study. No humans or animals will be used in the study, and since YouTube videos, which are public domain, will be evaluated, ethics committee approval was not required here, as in other similar studies.

Video Selection

Videos were searched in the YouTube videos section on

Cite as: Nas Kırdar N, Kırdar M, Aydın E, Konar Erol NM. Evaluation of YouTube videos as a source for urinary incontinence exercises. Duzce Med J. 2026;28(1):77-83. doi:10.18678/dtfd.1838760.

This is an open access paper distributed under the terms and conditions of the Creative Commons Attribution-NonCommercial 4.0 International License.

July 23, 2025, by typing "urinary incontinence exercises" and "urinary incontinence exercise therapy" as keywords. All YouTube searches were conducted under standardized conditions to enhance reproducibility. Searches were performed using a desktop computer with a stable internet connection, in incognito mode, and without being logged into a Google/YouTube account, in order to minimize personalization effects. Browser cookies and history were cleared prior to each search session. The location/region setting was fixed to [Türkiye], and no additional search filters (e.g., upload date, type, duration) were applied unless otherwise stated. All queries were conducted using the same browser and default settings to ensure consistency across searches.

Videos were ranked by relevance. A total of 432 videos were reached. The first 350 videos were added to the playlist for evaluation because users tend to open videos at the top of the list more often. The physician evaluated the videos on the list in terms of inclusion and exclusion criteria. Videos related to urinary incontinence exercises in English were included in the study. Exclusion criteria were as follows: i) languages other than English (22 videos), ii) irrelevant to the topic (45 videos), iii) no mention of exercise in the video (25 videos), iv) advertisements (9 videos), and v) repetitive videos (4 videos). Based on these criteria, 105 videos were excluded from the study. The remaining 245 videos were evaluated by two separate physicians (a physiatrist and a urologist).

Evaluation Parameters

1. Country (Which country is the video source)
2. Source (Who narrated the video, who provided the information; doctor, physiotherapist, hospital/healthcare facility, other (patient, sports trainer, yogi, etc.))
3. View count
4. Days online (time from the video's upload to YouTube to the day we watched it)
5. View rate (number of views/days online)
6. Image quality (image quality specified in the video settings, such as 720p, 1080p, etc.; poor, medium, good, very good)
7. Video duration (in seconds)
8. Number of likes
9. Number of dislikes
10. Number of comments
11. Modified DISCERN questionnaire (mDISCERN): It is a scale that examines the quality of resources by checking their characteristics. It consists of 5 questions, each question is answered with “yes” or “no”. A yes answer is worth "1" point, a no answer is worth "0" points. A score of 0 indicates the lowest resource quality, and a score of 5 indicates the highest resource quality (9).
12. Journal of the American Medical Association (JAMA) Benchmark Criteria: It is a 4-point scale. This scale is used to measure the accuracy and reliability of sources. "1" point is given for each criterion. The criteria are: i) authorship, ii) citation, iii) description, and iv) timeliness. The scores of the videos vary between 0 and 4 points (10).
13. Global Quality Score (GQS): It is a scale from 1 to 5 points from low quality to high quality developed to determine the content quality, flow, accuracy of videos, and whether they will be useful for patients. A higher GQS score means higher information quality (11,12).
14. The accuracy of the exercises was evaluated based on predefined criteria. A structured assessment checklist was developed in accordance with current clinical guidelines and the literature on pelvic floor muscle exercises (Kegel exercises) commonly recommended for the treatment of urinary incontinence. Videos were analyzed in terms of whether the correct muscle group was targeted, whether the exercise technique (including contraction and relaxation duration, number of repetitions, and proper positioning) was appropriately explained, and whether any warnings about incorrect practices were provided. Each video was independently assessed by two researchers and classified as either “correct” or “incorrect” in terms of exercise demonstration. Borderline cases were evaluated according to the predefined criteria, and any disagreements between reviewers were resolved through consensus with a third researcher.

All videos were evaluated by two separate researchers. Videos with differing scores were re-evaluated, and a joint decision was made.

Statistical Analysis

Descriptive statistics were reported as median, 25^{th}-75^{th} percentile, minimum, and maximum values for numerical variables; and frequency and percentage for categorical variables. The Mann-Whitney test and Kruskal-Wallis test were used for group comparisons. The Dunn test was used as a post-hoc test after the Kruskal-Wallis test. The relationship between GQS, JAMA, and mDISCERN scores and the parameters was assessed using Spearman’s rho correlation coefficient. A two-sided p-value of ≤ 0.05 was considered statistically significant. All analyses were performed using IBM SPSS v.21.0. (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.).

RESULTS

In this study, 245 videos were evaluated, and descriptive statistics are given in Table 1. The country where videos were uploaded most to the internet was the USA, with a rate of 39.6% (n=97). The majority (40.4%, n=99) of video uploaders were patients, yogis, fitness instructors, etc. (source other than doctors, physiotherapists, and hospitals). Table 2 shows distribution of the videos according to GQS, JAMA and m-DISCERN scores. According to the GQS score, the majority of the videos were in the intermediate quality group (41.2%, n=101), according to the JAMA score, the majority were in the partially adequate group (85.7%, n=210), and according to the mDISCERN score, 50.6% (n=124) of the videos were in the group of limited benefit for patients.

The numerical parameters of the videos and the scores of the evaluation scales according to the sources are given in Table 3. In the source-based evaluation, it was found that videos created by doctors had significantly higher view counts (p=0.015), video duration (p<0.001), number of comments (p<0.001), GQS scores (p=0.003), and mDISCERN scores (p=0.004) compared to other groups.

Table 1. Characteristics of the videos.

	(n=245)
Country, n (%)	
USA	97 (39.6)
India	56 (22.9)
Unknown (unspecified)	37 (15.1)
Canada	15 (6.1)
Australia	9 (3.7)
UK	9 (3.7)
Other	22 (8.9)
Source, n (%)	
Doctor	64 (26.1)
Physiotherapist	45 (18.4)
Hospital/Healthcare Facility	37 (15.1)
Other	99 (40.4)
Image Quality, n (%)	
Poor	11 (4.5)
Fair	13 (5.3)
Good	221 (90.2)
Exercise Accuracy, n (%)	
Incorrect	91 (37.1)
Correct	154 (62.9)
Video Parameters	
View count	1498 (195-54828) [0-9498528]
Number of Days Online	733 (234-1497.5) [9-10196]
View Rate	3 (0.35-54.2) [0-11361]
Video Duration	316 (159-559) [14-3495]
Like	29 (4-681.5) [0-158000]
Dislike	0 (0-0) [0-0]
Comment Count	2 (0-35) [0-6600]
mDISCERN	2 (2-3) [1-5]
JAMA	2 (2-3) [1-4]
GQS	3 (2-4) [1-5]

USA: United States of America, UK: United Kingdom, UAE: United Arab Emirates, mDISCERN: modified DISCERN questionnaire, JAMA: Journal of the American Medical Association, GQS: Global Quality Score, values are expressed as median (25^{th}-75^{th} percentile) [min-max].

Table 2. Quality assessment of videos.

	(n=245)
GQS, n (%)	
Low	77 (31.4)
Intermediate	101 (41.2)
High	67 (27.3)
JAMA, n (%)	
Insufficient	34 (13.9)
Partly Sufficient	210 (85.7)
Completely Sufficient	1 (0.4)
mDISCERN, n (%)	
1	57 (23.3)
2	124 (50.6)
3	57 (23.3)
4	6 (2.4)
5	1 (0.4)

mDISCERN: modified DISCERN questionnaire, JAMA: Journal of the American Medical Association, GQS: Global Quality Score

The JAMA score was higher in videos created by doctors and physiotherapists than in the others ($p<0.001$).

The comparison of parameters according to GQS scores is given in Table 4. Videos with high quality scores were observed to have significantly higher view count ($p=0.040$), view rate ($p=0.029$), video duration ($p<0.001$), like ($p=0.001$), comment count ($p<0.001$), mDISCERN ($p<0.001$), and JAMA scores ($p<0.001$) compared to low and intermediate- quality videos.

Table 5 shows the correlation analyses of evaluation parameters (GQS, JAMA, mDISCERN) with numerical variables. When correlation analyses were examined, it was seen that as GQS and mDISCERN scores increased, the number of views, view rate, video duration, number of likes, and number of comments increased.

Table 3. Comparison of parameters based on the source.

Parameter	Doctor (n=64)	Physiotherapist (n=45)	Hospital/Healthcare Facility (n=37)	Other (n=99)	p-value
View Count	6530 (397.250-89008) [0-4610877]	6068 (206.5-147957) [27-908666]	1026 (151.5-7443.5) [2-7783482]	655 (114-8511) [1-9498528]	**0.015**
Number of Days Online	906.5 (267.500-1696.500) [9-5569]	927 (630.500-1616.500) [70-10196]	696 (144-1443) [11-3833]	547 (108-1174) [10-4568]	**0.008**
View Rate	10.550 (1.025-106) [0-2269.1]	4.7 (0.3-91.350) [0.1-1901]	1.6 (0.495-12.850) [0.02-2740.6]	1.9 (0.2-44.400) [0.01-11361]	0.124
Video Duration	452.500 (286.250-687.750) [41-1598]	388 (227.500-624) [68-1148]	173 (95.500-364.500) [59-1936]	274 (114-496) [14-3495]	**<0.001**
Like	85.500 (24.250-1200) [0-76000]	139 (7-2000) [0-8200]	10 (3-119) [0-68000]	12 (2-118) [0-158000]	**<0.001**
Dislike	0 (0-0) [0-0]	0 (0-0) [0-0]	0 (0-0) [0-0]	0 (0-0) [0-0]	0.999
Comment Count	10 (0.250-119.250) [0-1903]	7 (1.5-95.5) [0-684]	0 (0-5) [0-4535]	0 (0-13) [0-6600]	**<0.001**
mDISCERN	2 (2-3) [1-4]	2 (2-3) [1-4]	2 (2-2.5) [1-5]	2 (1-2) [1-4]	**0.004**
JAMA	3 (2-3) [1-3]	3 (2-3) [1-3]	2 (2-3) [1-4]	2 (2-3) [1-3]	**<0.001**
GQS	3 (3-4) [2-5]	3 (3-4) [1-4]	3 (2-4) [1-5]	3 (2-4) [1-4]	**0.003**

mDISCERN: modified DISCERN questionnaire, JAMA: Journal of the American Medical Association, GQS: Global Quality Score, values are expressed as median (25^{th}-75^{th} percentile) [min-max], Dunn post-hoc test results; view count: medical doctor vs. other: p=0.045; number of days online: physiotherapist vs. other: p=0.008; video duration: physiotherapist vs. hospital/healthcare facility: p=0.021, medical doctor vs. hospital/healthcare facility: p<0.001, medical doctor vs. other: p=0.002; like: physiotherapist vs. other: p=0.010, medical doctor vs. other: p=0.003; comment count: medical doctor vs. hospital/healthcare facility: p=0.004, physiotherapist vs. hospital/healthcare facility: p=0.006, medical doctor vs. other: p=0.001, physiotherapist vs. other: p=0.003; mDISCERN: medical doctor vs. other: p=0.003; JAMA: physiotherapist vs. other: p=0.007, medical doctor vs. other: p=0.001; GQS: medical doctor vs. other: p=0.002.

When we looked at whether the exercises were given visually in the videos, we saw that exercises were given in 154 (%62.9) videos. The comparison results of the videos showing exercises and those not shown in terms of numerical values and evaluation parameters are given in Table 6. It was observed that the GQS (p<0.001), JAMA (p=0.010), and mDISCERN (p=0.019) scores of the exercise video group were higher than the video group without exercise.

Table 4. Comparison of parameters based on source GQS categories.

Parameter	Low (n=77)	Intermediate (n=101)	High (n=67)	p-value
View Count	1278 (143-27498.5) [0-9498528]	915 (121.500-45777.500) [0-2312701]	2856 (398-116919) [1-7783482]	**0.040**
Number of Days Online	828 (135.500-2616.500) [10-10196]	733 (152-1399) [9-4712]	672 (370-1388) [25-2840]	0.454
View Rate	2 (2-33.750) [0-11361]	2.7 (0.2-44.050) [0-1632.1]	6.2 (1-166.400) [0.03-3255.9]	**0.029**
Video Duration	177 (77.500-328) [14-2178]	323 (187-540.500) [41-1983]	616 (342-936) [53-3495]	**<0.001**
Like	13 (3-122.500) [0-158000]	27 (3-614.500) [0-22000]	84 (14-2800) [0-76000]	**0.001**
Dislike	0 (0-0) [0-0]	0 (0-0) [0-0]	0 (0-0) [0-0]	0.999
Comment Count	0 (0-4) [0-889]	4 (0-46.500) [0-1167]	11 (2-84) [0-6600]	**<0.001**
mDISCERN	1 (1-2) [1-3]	2 (2-2) [1-4]	3 (2-3) [2-5]	**<0.001**
JAMA	2 (1-2) [1-3]	2 (2-3) [2-3]	3 (3-3) [2-4]	**<0.001**

mDISCERN: modified DISCERN questionnaire, JAMA: Journal of the American Medical Association, GQS: Global Quality Score, values are expressed as median (25^{th}-75^{th} percentile) [min-max], Dunn post-hoc test results; view count: intermediate vs. high: p=0.020, low vs. high: p=0.030; view rate: low vs. high: p=0.005, intermediate vs. high: p=0.038; video duration: low vs. intermediate: p<0.001, low vs. high: p<0.001, intermediate vs. high: p=0.001; like: low vs. high: p=0.001, intermediate vs. high: p=0.016; comment count: low vs. intermediate: p=0.011, low vs. high: p<0.001, intermediate vs. high: p=0.023; mDISCERN: low vs. intermediate: p<0.001, low vs. high: p<0.001, intermediate vs. high: p<0.001; JAMA: low vs. intermediate: p<0.001, low vs. high: p<0.001, intermediate vs. high: p<0.001.

Table 5. Correlation analysis results.

Parameter	GQS		JAMA		mDISCERN	
	r_s	p	r_s	p	r_s	p
View Count	0.138	0.031	0.089	0.164	0.252	<0.001
Number of Days Online	-0.065	0.314	0.062	0.334	0.062	0.334
View Rate	0.165	0.010	0.248	<0.001	0.248	<0.001
Video Duration	0.482	<0.001	0.338	<0.001	0.338	<0.001
Like	0.231	<0.001	0.327	<0.001	0.327	<0.001
Comment Count	0.342	<0.001	0.393	<0.001	0.393	<0.001

mDISCERN: modified DISCERN questionnaire, JAMA: Journal of the American Medical Association, GQS: Global Quality Score, r_s: Spearman's rho.

Table 6. Comparison between exercise demonstration accuracy.

Parameter	Incorrect (n=91)	Correct (n=154)	p-value
View Count	2026 (23-56840) [0-7783482]	1355.5 (279-52891) [1-9498528]	0.344
Number of Days Online	1120 (108-2223) [11-10196]	621.500 (262.750-1298) [9-5407]	**0.040**
View Rate	2 (0.2-50.3) [0-2740.6]	4.100 (0.500-63.250) [0.01-11361]	0.077
Video Duration	236 (157-457) [44-2178]	352.500 (159.250-616.750) [14-3495]	0.067
Like	25 (0-724) [0-68000]	29.500 (5-679.250) [0-158000]	0.181
Dislike	0 (0-0) [0-0]	0 (0-0) [0-0]	0.999
Comment Count	1 (0-26) [0-4535]	4 (0-36) [0-6600]	0.288
mDISCERN	2 (1-2) [1-5]	2 (2-3) [1-4]	**0.019**
JAMA	2 (2-3) [1-4]	3 (3-4) [1-3]	**0.010**
GQS	2 (2-3) [1-5]	3 (3-4) [1-5]	**<0.001**

mDISCERN: modified DISCERN questionnaire, JAMA: Journal of the American Medical Association, GQS: Global Quality Score, values are expressed as median (25^{th}-75^{th} percentile) [min-max].

DISCUSSION

With the increasing older adult population, the importance of chronic diseases, comorbidities, and their management is also growing. Urinary incontinence is one of the conditions we frequently encounter in this age group and negatively affects the quality of life (13). It is possible to find much content about urinary incontinence and urinary incontinence exercises on social media. While there was less health-related content in the past, more content has begun to be produced in recent years. For this study, we examined 245 videos, and the average online time for these videos was 733 days, meaning most of the content was produced within the last 2-3 years. Our results support literature indicating that health-related internet use has increased in recent years (14). An important difference between our study and similar studies is that the number of videos evaluated is higher than theirs. When we looked at the countries from which the videos included in our study were uploaded, we saw that the majority were uploaded from the USA, with a rate of 39.6%, followed by India with a rate of 22.9%. In many similar studies, we see that most videos are uploaded from the USA (6).

The majority (40.4%) of video uploaders were patients, yogis, fitness instructors, etc. (source other than doctors, physiotherapists, and hospitals). In a 2021 study examining YouTube videos about urinary incontinence, it was found that the video narrator was mostly anonymous, with a rate of 50.9% (5). Other studies examining YouTube videos have also found that sources other than healthcare professionals are more common (15). Contrary to our results, Rodriguez-Radriguez et al. (6), in a study conducted in 2021 examining videos showing pelvic floor exercises after prostatectomy surgery, found that videos created by healthcare institutions were more common. In a 2024 study examining videos about incontinence that developed after pelvic surgery, the majority of video uploaders were healthcare professionals at 35% (7). The possible reason for this difference may be that the videos scanned in our studies provided more superficial information or exercises related to a disease, while the videos in the other studies described a surgical procedure and a condition that developed after this procedure, and therefore, more intensive medical terms and techniques were discussed, requiring healthcare professionals to explain the information.

While the first studies examining videos about urinary incontinence found the quality of the videos to be low (5,8), studies conducted in recent years have shown that higher quality content has been produced (6,16). In our study, according to the GQS score, 41.2% of the videos were of intermediate quality, according to the JAMA score, 85% of the videos were in the partially adequate group, and according to the mDISCERN score, 50.6% of the videos were in the group of limited benefit for patients. This may be related to the fact that the majority of the videos in our study were created by non-health professionals. Although recent studies suggest an improvement in video quality, the existing literature consistently highlights the ongoing lack of high-quality and reliable content, indicating a continued need for further research (17,18).

In our study, when evaluated according to sources, we found that the number of views, video duration, number of comments, GQS score, and mDISCERN score of videos created by doctors were higher than those of other sources, and the number of likes and JAMA score were higher in both doctor and physiotherapist videos than in others. Studies evaluating YouTube videos related to rheumatological diseases or osteoporosis exercises have also shown that high-quality content is limited and that much is produced by doctors or academic institutions. This highlights the importance of producing high-quality content and demonstrates that the need for such content continues (19,20). On the other hand, there are studies indicating that even videos produced by health professionals have low quality and weak evidence bases; this shows that professional writing alone does not guarantee high-quality online health information (21,22). In this respect, we have similar results with some studies in the literature (6,23). In contrast to our results, Gunay et al. (16), in a study examining YouTube videos on Kegel exercises, noted that videos from non-physician healthcare professionals were of higher quality, highlighting the importance of individuals with specialized training in a particular field and a multidisciplinary approach. The Kegel video evaluation score (KVES) and GQS were used as evaluation parameters in the aforementioned study. Our difference from this study is that, in addition to the GQS score, we also used the mDISCERN and JAMA scores to evaluate content quality, accuracy, and reliability.

Another difference from similar studies was the correlation analyses we conducted (6,7,16). The analysis revealed a positive correlation between mDISCERN and the number of views, view rate, likes, and comments. It also revealed a positive correlation between GQS and the number of views, view rate, likes, and comments. The analysis revealed a positive correlation between JAMA and the number of views, view rate, likes, and comments. It is an expected result that as videos with higher quality and more useful content are watched, interaction will increase, and the number of views, likes, and comments will also increase.

Our study was the first to investigate whether exercise related to urinary incontinence was demonstrated on video. When we look at it from this perspective, we see that the exercises were shown correctly in 154 (62.9%) videos. These videos had a shorter online presence than others, meaning more attention is paid to exercise demonstrations in recently created content. We also concluded that videos demonstrating the exercises correctly had higher GQS, JAMA, and mDISCERN scores.

The importance of exercises in the management of urinary incontinence has been emphasized by many studies (24-28). In an era where social media is used so actively on such an important issue, it is important to evaluate the accuracy and reliability of social media content that the patient may encounter. There are various studies conducted on this subject (5,6,8,16). With the results obtained from this and similar studies, it is possible to improve the content, make it more useful, and produce higher-quality content.

This study has several limitations. First, the analysis was restricted to English-language videos available on YouTube, which may limit the generalizability of the findings to other languages and platforms. Second, only the first 350 videos ranked by relevance were included, and the search was conducted using two specific keywords, which may have introduced selection bias and may not fully

represent all available content. Third, due to the dynamic and potentially personalized nature of YouTube's relevance algorithm, as well as the use of a single-time data collection approach, the results represent only a snapshot in time and may vary with different search conditions or at different time points. Although efforts were made to standardize the search procedure, algorithmic variability cannot be completely eliminated. Additionally, while GQS, JAMA, and mDISCERN are validated instruments, they include subjective components that may lead to interobserver variability. Finally, although the study assessed whether exercises were demonstrated appropriately, it did not evaluate their clinical effectiveness or impact on patient outcomes.

CONCLUSION

This study evaluated YouTube videos related to urinary incontinence exercises and, for the first time, investigated whether these exercises were demonstrated correctly. The videos were found to be mostly of intermediate quality (according to GQS) in terms of information and partially useful (according to JAMA) for patients. In addition, it was concluded that GQS and mDISCERN scores were higher in videos where the narrator was a doctor, and JAMA scores were higher in videos where the narrator was a doctor and in videos where the narrator was a physiotherapist, meaning that these videos were of higher quality. We've noticed that recently produced content includes more emphasis on exercises, and videos that demonstrate exercises correctly have higher GQS, JAMA, and mDISCERN scores, meaning they are of higher quality and more comprehensive. We hope that our results will contribute to the literature on this subject, and we believe that new studies will be needed in this internet age, where data is updated so frequently, and new content is produced so frequently.

DECLARATIONS

Acknowledgements: The authors do not wish to acknowledge any individual or institution.

Author Contributions: Conceptualization, N.N.K., M.K., E.A., N.M.K.E.; Methodology, N.N.K., M.K., E.A., N.M.K.E.; Software, N.N.K., M.K., E.A., N.M.K.E.; Validation, N.N.K., M.K., E.A., N.M.K.E.; Formal Analysis, N.N.K., N.M.K.E.; Investigation, N.N.K., M.K., E.A., N.M.K.E.; Resources, N.N.K., M.K., E.A., N.M.K.E.; Data Curation, N.N.K., M.K., E.A., N.M.K.E.; Writing–Original Draft, N.N.K.; Writing–Review & Editing, N.N.K., M.K., E.A., N.M.K.E.; Supervision, N.N.K., N.M.K.E. All authors have read and approved the final version of the manuscript.

Conflict of Interest: The authors declare no conflict of interest.

Supporting Institutions: This research received no external funding.

Ethical Approval: This study does not involve human or animal participants. All procedures followed scientific and ethical principles, and all referenced studies are appropriately cited.

Plagiarism Statement: This article has been evaluated for plagiarism, and no instances of plagiarism were detected.

Use of Artificial Intelligence (AI) Tools: The authors declare that no AI tools were used in the creation of this article.

REFERENCES

1. Drozd B, Couvillon E, Suarez A. Medical YouTube videos and methods of evaluation: literature review. JMIR Med Educ. 2018;4(1):e3. doi:10.2196/mededu.8527.
2. Yetişir A, Sarıyıldız A. Evaluation of the quality and reliability of YouTube videos on polymyalgia rheumatica. Osmangazi Journal of Medicine. 2024;46(1):110-7. doi:10.20515/otd.1372191.
3. Yetişir AE. YouTube as a source of information on Merkel cell carcinoma. Turkderm-Turk Arch Dermatol Venereol. 2023;57(3):83-6. doi:10.4274/turkderm.galenos.2023.87253.
4. Haylen BT, de Ridder D, Freeman RM, Swift SE, Berghmans B, Lee J, et al. An international urogynecological association (IUGA)/international continence society (ICS) joint report on the terminology for female pelvic floor dysfunction. Neurourol Urodyn. 2010;29(1):4-20. doi:10.1002/nau.20798.
5. Baran C, Yilmaz Baran S. YouTube videos as an information source about urinary incontinence. J Gynecol Obstet Hum Reprod. 2021;50(10):102197. doi:10.1016/j.jogoh.2021.102197.
6. Rodriguez-Rodriguez AM, Blanco-Diaz M, Lopez-Diaz P, de la Fuente-Costa M, Sousa-Fraguas MC, Escobio-Prieto I, et al. Quality analysis of YouTube videos presenting pelvic floor exercises after prostatectomy surgery. J Pers Med. 2021;11(9):920. doi:10.3390/jpm11090920.
7. Rodriguez-Rodriguez AM, De la Fuente-Costa M, Escalera-de la Riva M, Perez-Dominguez B, Paseiro-Ares G, Casaña J, et al. AI-Enhanced evaluation of YouTube content on post-surgical incontinence following pelvic cancer treatment. SSM Popul Health. 2024;26:101677. doi:10.1016/j.ssmph.2024.101677.
8. Stephen K, Cumming GP. Searching for pelvic floor muscle exercises on YouTube: what individuals may find and where this might fit with health service programmes to promote continence. Menopause Int. 2012;18(3):110-5. doi:10.1258/mi.2012.012007.
9. Charnock D, Shepperd S, Needham G, Gann R. DISCERN: an instrument for judging the quality of written consumer health information on treatment choices. J Epidemiol Community Health. 1999;53(2):105-11. doi:10.1136/jech.53.2.105.
10. Silberg WM, Lundberg GD, Musacchio RA. Assessing, controlling, and assuring the quality of medical information on the Internet: caveant lector et viewor--Let the reader and viewer beware. JAMA. 1997;277(15):1244-5.
11. Kunze KN, Cohn MR, Wakefield C, Hamati F, LaPrade RF, Forsythe B, et al. YouTube as a source of information about the posterior cruciate ligament: a content-quality and reliability analysis. Arthrosc Sports Med Rehabil. 2019;1(2):e109-14. doi:10.1016/j.asmr.2019.09.003.
12. Bernard A, Langille M, Hughes S, Rose C, Leddin D, Veldhuyzen van Zanten S. A systematic review of patient inflammatory bowel disease information resources on the World Wide Web. Am J Gastroenterol. 2007;102(9):2070-7. doi:10.1111/j.1572-0241.2007.01325.x.
13. Sensoy N, Dogan N, Ozek B, Karaaslan L. Urinary incontinence in women: prevalence rates, risk factors and impact on quality of life. Pak J Med Sci. 2013;29(3):818-22. doi:10.12669/pjms.293.3404.
14. Tarhan N, Tutgun-Ünal A, Ekinci Y. Yeni kuşak hastalığı siberkondri: yeni medya çağında kuşakların siberkondri düzeyleri ile sağlık okuryazarlığı ilişkisi [New generation disease cyberchondria: relationship between cyberchondria and health literacy of generations in the new media age]. OPUS International Journal of Society Researches. 2021;17(37):4253-97. Turkish. doi:10.26466/opus.855959.
15. Kuru T, Erken HY. Evaluation of the quality and reliability of YouTube videos on rotator cuff tears. Cureus.

2020;12(2):e6852. doi:10.7759/cureus.6852.
16. Gunay NF, Cakmak S, Gelmis M, Dizdaroglu C. Bridging the gap in patient guidance: quality analysis of kegel exercise videos on YouTube. Neurourol Urodyn. 2025;44(5):1156-62. doi:10.1002/nau.70070.
17. Özkent MS, Kılınç MT. Female urinary incontinence on TikTok and YouTube: is online video content sufficient? Int Urogynecol J. 2023;34(11):2775-81. doi:10.1007/s00192-023-05607-0.
18. Salman MY, Bayar G. Evaluation of quality and reliability of YouTube videos on female urinary incontinence. J Gynecol Obstet Hum Reprod. 2021;50(10):102200. doi:10.1016/j.jogoh.2021.102200.
19. Yemeshev Y, Bekaryssova D, Kocyigit BF. Assessment of the quality and reliability of YouTube videos related to teleradiology in musculoskeletal and rheumatic diseases: a cross-sectional study. Rheumatol Int. 2025;45(4):74. doi:10.1007/s00296-025-05831-5.
20. Ortanca B, Sarıçimen G, Bakılan F, Armağan O, Bal C. A quality and reliability analysis of geriatric exercise videos on YouTube. Turk J Osteoporos. 2024;30(2):109-14. doi:10.4274/tod.galenos.2023.28863.
21. Shah S, Patel R, Patel N, Patel I. Low educational quality and trustworthiness of YouTube videos by physiotherapists on shoulder joint mobilization techniques: a descriptive study. J Man Manip Ther. 2022;30(6):334-41. doi:10.1080/10669817.2022.2056319.
22. Abed V, Ray M, Smathers J, Stone AV. Assessment of video quality and reliability of YouTube videos regarding meniscus tear rehabilitation. Cureus. 2023;15(3):e36299. doi:10.7759/cureus.36299.
23. Loeb S, Sengupta S, Butaney M, Macaluso Jr JN, Czarniecki SW, Robbins R, et al. Dissemination of misinformative and biased information about prostate cancer on YouTube. Eur Urol. 2019;75(4):564-7. doi:10.1016/j.eururo.2018.10.056.
24. Kahyaoğlu Süt H, Küçükkaya B. Kadınların pelvik taban kas egzersizleri bilgi ve uygulama durumları [Knowledge and practices of women pelvic floor muscle exercises]. SDÜ Sağlık Bilimleri Dergisi. 2018;9(3):15-20. Turkish. doi:10.22312/sdusbed.411894.
25. Kaya İbiş B, Mutlugüneş Dönmez E, Er Güneri S. Kontinansın korunmasinda pelvik taban egzersizleri [Pelvic floor exercises in maintaining continence]. J Acad Res Nurs. 2022;8(1):45-50. Turkish. doi:10.55646/jaren.2022.82612.
26. Abu Raddaha AH, Nasr EH. Kegel exercise training program among women with urinary incontinence. Healthcare (Basel). 2022;10(12):2359. doi:10.3390/healthcare10122359.
27. Skaug KL, Engh ME, Frawley H, Bø K. Prevalence of pelvic floor dysfunction, bother, and risk factors and knowledge of the pelvic floor muscles in Norwegian male and female powerlifters and olympic weightlifters. J Strength Cond Res. 2022;36(10):2800-7. doi:10.1519/JSC.0000000000003919.
28. Hakbilen HG, Ince S. Effect of kegel exercise-focused intervention on urinary incontinence in elderly women. J Wound Ostomy Cont Nurs. 2025;52(2):137-46. doi:10.1097/WON.0000000000001162.