YOUTUBE VIDEOS AS A SOURCE OF INFORMATION FOR FAMILIES ON 'BASIC NEWBORN CARE'

Aileler İçin 'Temel Yenidoğan Bakımı' Konusunda Bilgi Kaynağı Olarak Youtube Videoları

Ceren YAPAR GÜMÜŞ[1] (ID) **Gözdem KAYKI**[2] (ID)

[1] *Department of Pediatrics, Faculty of Medicine, Ordu University, ORDU, TÜRKİYE*

[2] *Division of Neonatology, Faculty of Medicine, Hacettepe University, ANKARA, TÜRKİYE*

ABSTRACT	ÖZ

Objective: Information obtained from the internet provides speed and convenience, but it can also lead to misinformation and confusion. YouTube is one of the most widely used video websites in Turkey. Therefore, This study sought to assess the information quality available in YouTube videos on neonatal care.

Material and Methods: English words "newborn care" and "neonatal care" were used as search terms on the official YouTube website (http://www.youtube.com). The first 200 videos were downloaded and videos that did not comply with the evaluation criteria were deactivated. Video uploaders were categorized as doctors, nurses, health professionals other than doctors and nurses, television programs/news agencies, health and medical information websites, and others. Videos were analyzed by two independent reviewers. Videos were evaluated according to the modified DISCERN, JAMA, and Global Quality Score.

Results: A total of 29 videos were included in the study. Two of the videos (6.8%) were obtained from non-health websites. Others were created by health organizations and or healthcare workers. The mean modified DISCERN score of the videos was 28±6. Of these videos, 11 (38%) were rated as very good, 10 (34%) as good, 5 (17%) as moderate and 3 (10%) as non-qualified. The mean JAMA score was 1.0±0.9.

Conclusion: Videos uploaded mostly by health care workers and health organizations and not including advertisements were found to be informative enough by 90%. Choosing the uploaders carefully to access reliable health information is of utmost importance for supplying qualified information.

Keywords: *Health education, internet, newborn, postnatal care*

Amaç: İnternetten elde edilen bilgiler hız ve kolaylık sağlamakla birlikte yanlış bilgi ve kafa karışıklığına da yol açabilmektedir. YouTube, Türkiye'de en yaygın kullanılan video sitelerinden biridir. Bu nedenle, bu çalışma yenidoğan bakımı ile ilgili YouTube videolarında mevcut olan bilgi kalitesini değerlendirmeyi amaçlamıştır.

Gereç ve Yöntemler: İngilizce "newborn care" ve "neonatal care" kelimeleri resmi YouTube web sitesinde (http://www.youtube.com) arama terimleri olarak kullanılmıştır. İlk 200 video indirilmiş ve değerlendirme kriterlerine uymayan videolar devre dışı bırakılmıştır. Video yükleyicileri doktorlar, hemşireler, doktorlar ve hemşireler dışındaki sağlık profesyonelleri, televizyon programları/haber ajansları, sağlık ve tıbbi bilgi web siteleri ve diğerleri olarak kategorize edilmiştir. Videolar iki bağımsız hakem tarafından analiz edilmiştir. Videolar modifiye edilmiş DISCERN, JAMA ve Global Kalite Puanına göre değerlendirilmiştir.

Bulgular: Çalışmaya toplam 29 video dahil edilmiştir. Videoların ikisi (%6,8) sağlık dışı web sitelerinden elde edilmiştir. Diğerleri sağlık kuruluşları ve/veya sağlık çalışanları tarafından oluşturulmuştur. Videoların ortalama modifiye DISCERN puanı 28±6'dır. Bu videoların 11'i (%38) çok iyi, 10'u (%34) iyi, 5'i (%17) orta ve 3'ü (%10) niteliksiz olarak değerlendirilmiştir. Ortalama JAMA puanı 1.0±0.9'dir.

Sonuç: Çoğunlukla sağlık çalışanları ve sağlık kuruluşları tarafından yüklenen ve reklam içermeyen videolar %90 oranında yeterince bilgilendirici bulunmuştur. Güvenilir sağlık bilgisine erişmek için yükleyicilerin dikkatli seçilmesi nitelikli bilgi temini açısından büyük önem taşımaktadır.

Anahtar Kelimeler: *Sağlık eğitimi, internet, yenidoğan, doğum sonrası bakım*

INTRODUCTION

The increased use of social media and the internet has changed the behavior of receiving information about health and diseases, as it is faster and easier to access information on all kinds of topics (1,2). In one study, it was found that 74% of those who searched for health on the Internet made their decisions based on the information they obtained (3). When the purposes of visiting websites for medical conditions are analyzed, the most common reason is to obtain general information about diseases, as well as information and advice about symptoms and treatments of diseases. While this information obtained from the internet provides speed and convenience, it can also lead to misinformation and confusion. Accessing information from reliable health-related websites or videos organized by health professionals is of utmost importance for the provision of quality information.

YouTube stands as the most extensively utilized video platform. In Turkey the most frequently visited site after Google (4). People are increasingly turning to YouTube for health-related issues (5). Based on this information, the potential and actual impact of YouTube as a channel for information distribution and communication should not be underestimated. Doctors, nonphysician healthcare professionals, organizations with or without financial concerns, and nongovernmental organizations are increasingly using YouTube to inform and educate patients. Nonetheless, the quality, reliability, accuracy, and educational value of the information in YouTube videos is questionable and unpredictable. Inaccurate content and information can adversely affect doctor-patient interaction (6). However, YouTube videos, when used with the appropriate and trusted sources, can help patients and their parents understand and make informed decisions about illnesses or diseases, such as the right care, the right practice, alarm signs of illness, and when to consult a physician. When the literature was reviewed, no prior research study investigating the usefulness and reliability of YouTube videos on neonatal care was found. Therefore, the objective of this study was to assess the information quality present in YouTube videos about neonatal care.

MATERIALS AND METHODS

On the official YouTube website (http://www.youtube.com), the English words "newborn care" and "neonatal care" were used as search terms. The first 200 videos were downloaded. Videos with advertisements, comments turned off, likes and dislikes disabled, duration less than 1 minute, in a language other than English, and mute videos were exempted. Video uploaders were categorized as doctors, nurses, health care workers other than doctors and

nurses, television programs/news agencies, health and medical information websites, and others. The upload date, number of views, likes and dislikes, comments, and video uploaders were recorded. The view ratio was determined by dividing the number of views by the number of days since the upload. The like ratio was calculated by multiplying the sum of the number of likes and dislikes by 100 and then dividing the number of likes by this result. The videos were analyzed by two independent reviewers. It was evaluated according to modified DISCERN, Journal of American Medical Association (JAMA), and Global Quality Score (GQS). DISCERN scoring has been used in previous studies evaluating websites. This scoring system consists of 3 sections that assess the reliability of the publication, the quality of the information about treatment options, and the overall quality of the publication about treatment options. The reliability of the publication section consists of 8 questions and the total score is 40. The section evaluating the quality of information about treatment options consists of 7 questions and the last section consists of 1 question (7). However, since the subject investigated did not include any treatment, a modified DISCERN scoring system with 8 questions evaluating the reliability of the publication was used in our study instead of the original 16 questions. Each question was scored from 1 to 5 and the total score was 40. This scoring system was adapted from the original form and divided into four groups: 32-40 points were categorized as very good, 26-31 points as good, 20-25 points as moderate and 8-19 points as non-qualified. The modified DISCERN scoring system is shown in Table 1.

Table 1: Modified DISCERN scoring system

Question	Score
Is the publication trustworthy?	
1) Are the objectives evident?	5-1
2) Does it accomplish its objectives?	5-1
3) Is it pertinent?	5-1
4) Is it apparent which information sources were utilized in creating the publication (aside from the producer or author)?	5-1
5) Is it evident when the information utilized or reported in the publication was generated?	5-1
6) Is it just and objective?	5-1
7) Does it offer information regarding supplementary sources for support and information?	5-1
8) Does it mention aspects of ambiguity?	5-1

The JAMA criteria, introduced in 1997, were designed to evaluate the quality of medical information available on the Internet (8). It includes items on authorship, attribution, disclosure, and currency, with a total score of 1 for each item; a total score of 4 indicates high quality, and a score of 0 indicates low quality. The JAMA criteria are shown in Table 2.

Table 2: JAMA criteria

Criteria	Explanation	Score
Authorship	The authors and contributors should offer their affiliations and credentials.	0-1
Attribution	All copyright information should be noted, and references and sources of content should be listed explicitly.	0-1
Disclosure	Complete transparency is necessary for conflicts of interest, sponsorship, financial backing, advertising, assistance, and video ownership.	0-1
Currency	Dates that content was posted and dates of updates to content should be provided	0-1

The Global Quality Score (GQS) was created by Bernard et al. to assess the overall quality of videos (9). It is a five-point scale. A score of 5 is given if there is exceptional quality, exceptional flow, and extremely valuable information for patients; a score of 1 is given if there is poor quality, poor continuity, significant information gaps, and information that is not useful for patients. The GQS is shown in Table 3.

Table 3: Global Quality Score

Definition	Score
Inferior quality, poor continuity, considerable information deficiencies, not beneficial for patients.	1
While there is some information offered, it is generally inadequate and offers limited value to patients.	2
It has a moderate quality, with decent coverage of some significant information.	3
High quality, high flow, most relevant information is covered, useful for patients	4
Exceptional quality and exceptional flow, are highly valuable for patients.	5

In addition to these instruments, six essential components for neonatal care were identified. These six items included feeding, warmth and clothing, hygiene (bath time, diaper care), doctor check-up information (routine immunizations, weight check or abnormal findings), sleep, and baby carrying (car seat, kangaroo, etc.). We noted how many mentions of content were made throughout a video.

The statistical analysis was carried out utilizing the SPSS 23.0 program. Qualitative variables of interest were expressed as percentages and frequencies according to the Kolmogorov-Smirnov test, normally distributed continuous variables as means ± standard deviations, and non-normally distributed variables as medians (quartiles 25-75). Student's t-test and Mann-Whitney U test were used when necessary to determine the main differences between the qualified and non-qualified groups according to the modified DISCERN score. Ordu University Clinical Research Ethics Committee approved this study (Number: 2024/84).

RESULTS

A total of 29 videos were included in the study. Two of the videos (6.8%) were obtained from non-health websites. The others were uploaded by 13 nurses, 11 health and medical information websites, and 3 doctors. The characteristics of the videos are shown in Table 4.

Table 4: Video characteristics

Variables	Median	IQR (25-75)
Number of views	43848	10208-366600
Number of days after upload	586	382-926
Video length (minute)	9	4-18
Number of likes	391	59-2800
Number of comments	23	0-96
View ratio	34.1	8.2-85.8
Mean±SD		
Like ratio	0.01±0	
JAMA	1.0±0.9	
Modified discern	28±6	
GQS	3.4±1.3	
Number of content covered	2.7±1.8	

SD: Standard deviation, IQR: Interquartile range

The mean modified DISCERN score was 28±6. Of these videos, 11 (38%) were rated as very good, 10 (34%) as good, 5 (17%) as moderate and 3 (10%) as non-qualified. The mean JAMA score was 1.0±0.9. GQS was 3.4±1.3.

There was no difference between videos with (n=26, 90%) and without (n=3, 10%) qualified scores according to the modified DISCERN scoring and between videos with and without good scores in terms of views, like ratio, number of content covered, and JAMA scores. While there was no difference between the videos with and without a good score according to the modified DISCERN scoring in terms of GQS, there was a statistically significant difference between the videos with and without a qualified score according to the modified DISCERN scoring (p=0.04) (Table 5, 6).

Table 5: Differences between qualified and non-qualified scores according to modified DISCERN scoring

Modified DISCERN scoring	Mean±SD Qualified (>19) (n=26, 90%)	Mean±SD Non-qualified (<20) (n=3, 10%)	p
Video length (minute)	25.3±43	13.2±12	0.45
View ratio	440±852	603±786	0.89
Like ratio	0.01	0.01	1
Number of content covered	2.9±1.8	1.3±0.5	0.17
JAMA	1.1±0.9	0.3±0.5	0.76
GQS	3.7±1.1	1.0±0	0.04

SD: Standard deviation, GQS: Global Quality Score, JAMA: Journal of American Medical Association

Table 6: Differences between good and not good scores according to modified DISCERN scoring

Modifiye DISCERN puanlaması	Mean±SD Good (>25) (n=21, 72.5%)	Mean±SD Not good (<26) (n=8, 27.5%)	p
Video length (minute)	28.5±47	12.2±7.6	0.1
View ratio	325±609	803±1236	0.516
Like ratio	0.01	0.01	1
Number of content covered	3,1±1,8	1.7±1.3	0.06
JAMA	1.2±0.8	0.5±0.7	0.84
GQS	4±0.7	1.8±1.3	0.18

SD: Standard deviation, GQS: Global Quality Score, JAMA: Journal of American Medical Association

DISCUSSION

Videos on YouTube can be uploaded by any user without going through any standardization and approval process (6). Hence, the predictability of these videos' quality and reliability is uncertain. Identifying accurate and reliable sources for such a large amount of unreviewed and unedited data has become a serious problem (10). In this study, videos uploaded for newborn care were analyzed. Other topics whose quality has been previously investigated using YouTube related to health care in the pediatric age group include tonsillectomy, management of burn injuries, dental fear and anxiety, and cardiopulmonary resuscitation (11-14). According to the literature, our study is the first to analyze YouTube videos related to neonatal care.

The newborn period is the most sensitive time for babies. Parents may not have enough information, especially with their first baby. However, appropriate care is very important during this period. YouTube is a popular platform that allows parents to easily access a variety of videos on newborn baby care. Educational and supportive videos on YouTube have become an important resource for parents for safe and effective newborn care. Modified DISCERN scoring was used in this study. This method is different from the brief DISCERN proposed by Khazaal et al. They selected 6 points from the original 16-item scoring and investigated the strength and concurrent validity of the relationship between the brief and the original DISCERN scores. In Brief DISCERN, a score of 16 and above was accepted as an indication that the content was good (15). Since there was no treatment method in our study, we created the modified DISCERN scoring by taking the first 8 questions of the original DISCERN score that discuss the reliability of the publication. The scoring assessing the adequacy of the study was determined proportionally according to the original and brief DISCERN scores. In our evaluations, 90% of the videos were adequate according to the modified DISCERN scoring and 72.5% were good to very good. In a study by Sahin et al. analyzing videos about retinopathy of prematurity on YouTube, 64% of the videos were found to be useful (16). In a study evaluating asthma websites using the Brief DISCERN instrument, 68% of the websites had a Brief DISCERN score of ≥16, showing that most asthma websites had a good quality of information. However, when separated into sponsored and non-sponsored sites, 80% of non-sponsored sites had a score of ≥16 (17). This suggests that the exclusion of commercial sites containing advertisements was the most important factor that contributed to the higher proportion of videos of adequate quality in our study compared to other studies. Those with qualified scores according to the modified DISCERN scoring also had statistically significantly higher GQS. This supports that the assessment of the modified DISCERN score is accurate. It also encourages its use in future studies. In the methodology, the researchers identified six contents that were considered important to mention when providing information on newborn care. However, the videos were found to mention an average of two contents. The low number of content did not change the quality of the video. Some videos focused on specific topics. Therefore, it was concluded that the high number of content may not be an accurate measure of video quality.

Comparing our study with Tosun et al.'s research on cardiopulmonary resuscitation, it was observed that the total number of views was higher in this study, and videos that had been available on the platform for a longer period were included in the study (14). This is because the topic is more comprehensive and researched by more people. Viewing rates do not vary according to scoring systems. This shows the accessibility of all kinds

of videos for every viewer and that viewers are not selective. It also reveals how easy it is to access low-quality videos.

The current study has some limitations. Although the videos were evaluated independently by the pediatrician and the neonatologist, the observations remained subjective. This is unknown how many of the comments, dislikes, and likes of videos are made by parents. There are no appropriate accredited scoring systems for videos. The researchers analyzed the first 200 videos that emerged after searching with certain keywords. However, qualified information videos may not be included in this scope. When the inclusion and exclusion criteria are applied, the number of videos in our study is low.

In conclusion, this study, in which we analyzed YouTube videos on neonatal care, showed that the quality of the videos was qualified. If the people who upload the content are selected appropriately, it can provide both easy access to medical information on the web and correct information. This would be extremely useful for parents about newborn care. Our study is important in that it guides future studies.

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