Original Research / Orijinal Araştırma

Evaluation of YouTube Videos via DISCERN, GQS, JAMA, and VIQI Tools: Traditional Complementary Feeding (TFC) vs Baby-Led Weaning (BLW) in Infants

DISCERN, GQS, JAMA ve VIQI Araçları ile YouTube Videolarının Değerlendirilmesi: Bebeklerde Geleneksel Tamamlayıcı Beslenme (TB) ile Bebek Liderliğinde Beslenme (BLW)

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Abstract

Aim: This study aims to examine the content of the videos about traditional complementary feeding (TCF) or complementary feeding (CF) vs baby-led weaning (BLW) on the YouTube social media platform.

Method: The 250 videos obtained by a researcher dietitian typing "Complementary feeding in infants" and "BLW feeding in infants" in English and Turkish in the search tab on the YouTube platform, with a view count of 10,000 or more, between 2015 and 2024, were watched by a study participant. The watched videos were evaluated using DISCERN (Quality Criteria for Consumer Health Information), GQS (Global Quality Score), JAMA (The Journal of the American Medical Association), and VIQI (Video Information and Quality Index). The data obtained were statistically evaluated using the SPSS 21.0 package program.

Findings: 40.8% of the videos were found to be at a moderate level according to DISCERN classification, and 46.8% were at a high level according to GQS classification. There was a difference between BLW and complementary feeding videos in terms of video duration, number of views, and VIQI2 score ($p<0.05$). While 54.5% of the videos published in Türkiye were found to be poor according to the DISCERN category, 34.9% of the videos published in other countries were found to be weak ($p=0.001$). While 22.6% of the videos where the person in the video was a dietitian were poorer according to the DISCERN category, 83.8% of the videos where the person in the video was an influencer were found to be weak ($p=0.001$).

Conclusion: The most popular videos were found to be those featuring influencers. The quality of videos featuring dietitians was higher than that of the videos featuring influencers. The videos of dietitians and physicians are more fluent and convey more information.

Key words: Complementary Feeding, Baby- Led Weaning, Complementary Feeding Period, YouTube

Özet

Amaç: Bu çalışmanın amacı, YouTube sosyal medya platformunda geleneksel tamamlayıcı beslenme veya tamamlayıcı beslenme (TB) ile bebek liderliğinde sütten kesme (BLW) hakkındaki videoların içeriğini incelemektir.

Yöntem: Araştırmacı diyetisyen tarafından YouTube platformunda arama sekmesine İngilizce ve Türkçe olarak "Bebeklerde tamamlayıcı beslenme" ve "Bebeklerde BLW ile beslenme" yazılarak elde edilen, 2015-2024 yılları arasında izlenme sayısı 10.000 ve üzeri olan 250 video bir çalışma katılımcısı tarafından izlenmiştir. İzlenen videolar DISCERN (Quality Criteria For Consumer Health Information), GQS (Global Quality Score), JAMA (The Journal of the American Medical Association) ve VIQI (Video Information and Quality Index) kullanılarak değerlendirildi. Elde edilen veriler SPSS 21.0 paket programı kullanılarak istatistiksel olarak değerlendirilmiştir.

Bulgular: Videoların %40,8'i DISCERN sınıflandırmasına göre orta düzeyde, %46,8'i ise GQS sınıflandırmasına göre yüksek düzeyde bulunmuştur. BLW ve tamamlayıcı beslenme videoları arasında video süresi, izlenme sayısı ve VIQI2 skoru açısından fark vardı ($p<0.05$). DISCERN kategorisine göre Türkiye'de yayınlanan videoların %54,5'i zayıf bulunurken, diğer ülkelerde yayınlanan videoların %34,9'u zayıf bulunmuştur ($p=0,001$). Videodaki kişinin diyetisyen olduğu videoların %22,6'sı DISCERN kategorisine göre zayıf bulunurken, videodaki kişinin influencer olduğu videoların %83,8'i zayıf bulunmuştur ($p=0,001$).

Sonuç: En popüler videoların influencerların yer aldığı videolar olduğu görülmüştür. Diyetisyenlerin yer aldığı videoların kalitesi, influencerların yer aldığı videoların kalitesinden daha yüksektir. Diyetisyenlerin ve doktorların videoları daha akıcıdır ve daha fazla bilgi aktarmaktadır.

Anahtar kelimeler: Bebek Liderliğinde Beslenme, Tamamlayıcı Beslenme, Youtube

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Introduction

Nutritional habits during infancy may have an impact on future metabolic programming and body composition. Complementary feeding can be defined as the period when solid foods are introduced into the infant's diet, with the gradual decrease in breastfeeding or the use of formula. This period in which the infant acquires the feeding model of the family is important for both nutritional and developmental reasons. Existing data suggest that the timing and method of complementary feeding is important for diseases such as obesity, allergic diseases, celiac disease, and diabetes.[1]

The BabyLed Weaning (BLW) method is a method in which the baby feeds itself, consuming food that it holds with its own hand instead of a spoon. It is an alternative to introducing complementary foods to babies. Babies fed with the BLW method can consume the same food as the family and spend mealtimes with the family.[2] In recent years, it has been observed that many parents prefer the BLW method over the traditional feeding method. Although not conclusive, observational studies suggest that BLW has positive effects on their diet and body weight.[3] Adopting the appropriate weaning method is crucial in improving lifelong health status. The risk of nutritional disorders and other health problems that may develop later in life can be reduced with an appropriate method.[1]

YouTube is a social media platform for online video sharing. The content of this platform includes various types of videos. Video clips, music clips, short original videos, and educational videos are published. There are also many educational videos about health and treatment methods.

This study aims to examine the content of the videos on Complementary Feeding (CF) or Traditional Complementary Feeding (TCF) and BLW on the YouTube , which is the most watched social media platform in the world, and to evaluate the content of the videos on the CF period on this platform in terms of information accuracy, information timeliness, and video quality with objective and evidence-based information.

Methods

A total of 250 videos were identified by searching the keywords “complementary feeding in infants” and “BLW feeding in infants” in both English and Turkish on the YouTube platform, between 2015 and 2024. Only videos with a minimum of 10,000 views were included. All videos were watched in their entirety by a designated researcher. The number of viewers, duration of viewing, and whether the full video content was analyzed were taken into account. The videos were evaluated by using the DISCERN, GQS, JAMA, and VIQI scoring systems to assess the quality, accuracy, and reliability of the information presented.

DISCERN Tool

DISCERN is a tool for evaluating the quality of health information on treatment options. It helps consumers, carers, and healthcare professionals assess and improve the quality of such information, supporting informed decision-making. It can also be used as a screening tool, a checklist, and a training resource for health professionals.[4]

GQS Tool

The GQS scoring system assesses website quality based on information accessibility, flow, usefulness, and overall quality. Developed by Bernard et al., it highlights the need for expert evaluation due to the poor quality of some online health information. The system aims to help patients access reliable, accurate data for informed decisions.[5]

JAMA Tool

Silberg et al. developed a quick evaluation system to identify low-quality, unreliable content on the internet. They outlined four key criteria for reliable information: authorship, citations, sponsorship indication, and timeliness. These criteria aim to filter poor-quality content efficiently, acknowledging the dynamic nature of the web, where validity may change.[5]

VIQI Tool

VIQI is a tool for assessing website information quality using a 5-point Likert scale (1–5). It evaluates four key areas: information flow, accuracy, quality (based on media usage), and consistency (between video title and content). Higher scores indicate better quality, with each sub-assessment contributing to the total score.[6]

Data Evaluation

The data obtained were statistically evaluated by using the SPSS 21.0 package programme. Statistical significance was accepted as $p<0.05$ in all analyses. The conformity of the data to normal distribution was checked by the Kolmogorov-Smirnov test. Descriptive statistics included number, percentage, mean, standard deviation, median, minimum, and maximum values. Since continuous variables did not show normal distribution, the Mann Mann-Whitney U test was applied in two-group comparisons. The chi-square test was used to analyse categorical variables.

Results

While 48.4% of the videos were published in Türkiye, 56.8% of the videos featured influencers. Only 12.4% of the videos featured dietitians. 48.0% of the videos were published in 2020 and after. The average duration of the videos was 495.70 seconds, while the average number of views was 152754.05. The average JAMA, VIQI1, VIQI2, VIQI3, VIQI4, and VIQI total scores of the videos were 2.21, 4.09, 4.00, 1.97, 4.82, and 14.90, respectively. 40.8% of the videos were found to be at a medium level according to DISCERN classification, and 46.8% were at a high level according to GQS classification (Table 1, Table 2). Comparison of video statistics according to video categories / year of publication / country of publication is given in Table 4. A difference was found between BLW and complementary feeding videos in terms of video duration, number of views, and VIQI2 score ($p<0.05$) (Table 3). Significant differences were found in terms of video duration, number of comments, JAMA, VIQI1, VIQI3, and VIQI total scores between videos published before 2020 and videos published in 2020 and after ($p<0.05$). The evaluation of the DISCERN/GQS categories of the videos in terms of various parameters is given in Table 5. While 54.5% of the videos published in Türkiye were found to be weak according to the DISCERN category, 34.9% of the videos published in other countries were found to be weak ($p=0.001$). While 22.6% of the videos in which the person in the video was a dietician were found to be poorer according to the DISCERN category; 83.8% of the videos in which the person in the video was an influencer were found to be poorer ($p=0.001$).

Table 1. *Descriptive Information About Videos (n=250)*

	N	**%**
Categories of feeding		
BLW	102	40,8
Traditional	148	59,2
Country		
Türkiye	121	48,4
Others	129	51,6
Language of videos		
Turkish	122	48,8
Others	128	51,2
Video owner		
Dietitian	31	12,4
Influencer	142	56,8
Others	77	30,8
Discern score		
Strong	37	14,8
Moderate	102	40,8
Weak	111	44,4
GQS score		
Strong	116	46,4
Moderate	97	38,8
Weak	37	14,8
Video's year		
Pre 2020	130	52,0
Post 2020	120	48,0

Table 2. *Descriptive Information About Videos*

Parameters	**Average**	**SD**	**Median**	**Min**	**Max**
Video duration (sec)	495,70	367,36	408,50	24,00	2461,00
Year of videos	2019,47	2,11	2019,00	2015,00	2024,00
Number of views	152754,05	321666,17	49731,50	31,35	2871412,00
Number of likes	1458,04	2988,13	438,50	0,00	27000,00
Number of dislikes	0,00	0,00	0,00	0,00	0,00
Number of comments	73,97	122,78	24,50	0,00	801,00
JAMA	2,21	0,66	2,00	1,00	4,00
VIQI1	4,09	0,76	4,00	1,00	5,00
VIQI2	4,00	0,72	4,00	2,00	5,00
VIQI3	1,97	0,91	2,00	0,00	4,00
VIQI4	4,82	0,60	5,00	1,00	5,00
VIQI Total	14,90	1,93	15,00	8,00	19,00

BLW: Baby-led weaning, SD: Standard deviation

Table 3. *Comparison of Video Statistics by Video Categories*

	BLW					**Traditional**						
Parameters	**Average**	**SD**	**Median**	**Min**	**Max**	**Average**	**SD**	**Median**	**Min**	**Max**	**Z**	**P**
Video duration (sec)	559,23	405,17	460,00	46,00	2461,00	451,92	333,27	373,50	24,00	1771,00	-2,197	**0,028**
Year of videos	2019,38	2,28	2019,00	2015,00	2024,00	2019,53	1,99	2020,00	2015,00	2023,00	-0,407	0,684
Number of views	109582,31	256577,28	36221,00	5155,00	2300000,00	182507,54	357558,45	67476,00	31,35	2871412,00	-2,164	**0,030**
Number of likes	1283,88	2501,22	383,00	13,00	18000,00	1578,07	3284,89	445,00	0,00	27000,00	-0,170	0,865
Number of dislikes	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,000	1,000
Number of comments	69,92	104,51	31,00	0,00	627,00	76,76	134,20	18,50	0,00	801,00	-1,150	0,250
JAMA	2,19	0,70	2,00	1,00	4,00	2,22	0,63	2,00	1,00	4,00	-0,315	0,753
VIQI1	4,04	0,78	4,00	2,00	5,00	4,13	0,74	4,00	1,00	5,00	-1,077	0,281
VIQI2	3,75	0,70	4,00	3,00	5,00	4,17	0,68	4,00	2,00	5,00	-4,660	**0,000**
VIQI3	1,97	0,92	2,00	0,00	4,00	1,97	0,90	2,00	0,00	4,00	-0,037	0,970
VIQI4	4,91	0,40	5,00	2,00	5,00	4,76	0,70	5,00	1,00	5,00	-2,212	**0,027**
VIQI Total	14,70	1,82	15,00	9,00	19,00	15,04	2,00	15,00	8,00	19,00	-1,764	0,078

*Mann Whitney U test, statistical significance $p<0.05$
BLW: Baby-led weaning, SD: Standard deviation

Table 4. *Evaluation of Discern categories of videos in terms of various parameters*

		Strong	**Moderate**	**Weak**
Video categories	**BLW**	18 (17.6)	32 (31.4)	52 (51.0)
	Traditional	19 (12.8)	70 (47.3)	59 (39.9)
X²		6,377		
p		**0,041**		
Year	**Pre 2020**	9 (6.9)	51 (39.2)	70 (53.8)
	Post 2020	28 (23.3)	70 (42.5)	59 (34.2)
X²		16,961		
p		**0,001**		
Country	**Türkiye**	2 (1.7)	53 (43.8)	66 (54.5)
	Others	35 (27.1)	49 (38.0)	45 (34.9)
X²		33,341		
p		**0,001**		
Video's owner	Dietitian	7 (22.6)	17 (54.8)	7 (22.6)
	Influencer	16 (11.3)	33 (23.2)	93 (83.8)
	Others	14 (18.2)	52 (67.5)	11 (14.3)
X²		62,058		
p		**0,001**		

*Chi-square test, statistical significance $p<0.05$
BLW: Baby-led weaning

Table 5: ***Evaluation of GQS Categories of Videos in Terms of Various Parameters***

	Video categories		**X²**	**p**	**Year**		**X²**	**p**	**Country**		**X²**	**p**	**Video's owner**			**X²**	**p**
	BLW	**Traditional**			**Pre 2020**	**Post 2020**			**Türkiye**	**Others**			**BLW**	**Traditional**			
Weak	37 (36.3)	79 (53.4)	7,242	**0,002**	51 (39.2)	65 (54.2)	6,089	**0,048**	44 (36.4)	72 (55.8)	10,262	**0,006**	18 (58.1)	51 (35.9)	47 (61.0)	17,178	**0,002**
Moderate	48 (47.1)	49 (33.1)			59 (45.4)	38 (31.7)			58 (47.9)	39 (30.2)			12 (38.7)	63 (44.4)	22 (28.6)		
Strong	17 (16.7)	20 (13.5)			20 (15.4)	17 (14.2)			19 (15.7)	18 (14.0)			1 (3.2)	28 (19.7)	8 (10.4)		

***Chi-square test, statistical significance p<0.05**
BLW: Baby-led weaning

Discussion

According to the data in our study, 30.8% of the videos belong to the other category, which includes physicians and health professionals, while dietitians are included in only 12.4% of these videos. 56.8% are in the influencer category. The influencer category includes hospital channels, university channels, and association channels as well as individual channels. When similar studies were examined, it was reported that 43% of the videos uploaded by healthcare professionals in a study evaluating Botox videos.[7] In another study examining spondyloarthritis videos, it was reported that 62% of the videos were uploaded by healthcare professionals.[8] Considering these studies, the rate of videos uploaded by physicians and health professionals is higher than the result in our study.

In our study, 40.8% of the videos were found to be of moderate quality according to the DISCERN classification, which is generally due to the lack of accessible and useful reference sources, such as publications and studies in the videos, and the fact that controversial issues are often not addressed. In addition, in some of the videos, the information was not unbiased, which explains why 44.4 per cent of the videos were found to be of poor quality according to the DISCERN classification. When analysed according to the GQS classification, 46.8% of the videos were found to be of a high quality.

In our study, there is a difference between BLW and CF videos when the duration of the videos, the number of views, and the accuracy of the information are considered. Looking at the videos published before and after 2020, the JAMA, VIQI1, VIQI3, and VIQI total scores of the videos published after 2020 were significantly higher. This shows that the video quality increases as we get closer to the present day, and the quality of current videos is better. The evaluation of videos on YouTube within the society is evaluated through criteria such as the number of views, likes, and comments. When video statistics were compared according to DISCERN category, significant differences were found for the year of publication, number of comments JAMA, VIQI1, VIQI2, VIQI3, and VIQI total scores. These data show that the quality of current videos is better, and as the quality improves, viewers give more interaction to the videos. When video statistics were compared by GQS category, significant differences were found for video duration, number of likes, number of comments, JAMA, VIQI1, VIQI2, VIQI3, VIQI4, and VIQI total scores. These data can be explained by the fact that as the duration of the video increases, the amount of information it contains increases, and viewers can make accurate evaluations by interacting with videos of high quality, such as liking and commenting. A study found no correlation between viewing rate and DISCERN and total content score, while a positive correlation was found between viewing rate and total VIQI score.[9] In this study, information flow was more decisive on the quality of the video compared to information accuracy.

According to another important finding in our study, significant differences were found between influencers and others for JAMA and VIQI3 scores. For VIQI1, VIQI2, and VIQI total scores, significant differences were found between dietitian and influencer and between influencer and others. While 22.6% of the videos in which the person in the video is a dietitian are found to be weak according to the DISCERN category, 83.8% of the videos in which the person in the video is an influencer are found to be poorer. As a result of these data, it was found that the videos of dietitians and other categories were of higher quality than influencer videos. It is thought that the reason for no significant difference between dietitian and other is that the other category consists of health professionals, hospitals, and associations.

In our study, when the DISCERN/GQS categories of the videos were evaluated in terms of various parameters, 54.5% of the videos published in Türkiye were found to be poor according to the DISCERN category, while 34.9% of the videos published in other countries were found to be poor.

Conclusions

Despite the presence of the videos of moderate and weak quality in our study, the videos analysed are generally of good quality. The quality of videos featuring dietitians was found to be higher than the quality of videos featuring influencers. While the videos of mothers who are influencers are more about personal experience, the videos of physicians are generally more fluent and provide more evidence-based information. Dietitians' videos are fewer in number compared to physicians and influencers. However, similar to the videos of physicians, the videos of dietitians are also more fluent and information-rich. These findings are important for primary care providers, as they highlight the need to guide parents toward accurate and reliable digital health information, especially on topics like infant nutrition.

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