



## PHARMACOLOGICAL TREATMENT OF OBESITY ON YOUTUBE: IS THERE INFORMATIVE POTENTIAL ON THIS SOCIAL MEDIA PLATFORM?

TRATAMENTO MEDICAMENTOSO DA OBESIDADE NO YOUTUBE: HÁ POTENCIAL INFORMATIVO NA REDE SOCIAL?

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**ABSTRACT:** Evaluate information about obesity treatment available on YouTube. Methods: cross-sectional study with collection carried out on September 20, 2021. The data was categorized according to the profile of the person responsible. Presence of commercial interest and quality of information assessed using the Brief DISCERN instrument. Results: 89.8% of the sample did not identify a specific target audience for the information. Health professionals were responsible for 59.3% of the sample. Videos with the highest number of views were those published by TV stations, as well as the highest approvals. The content published by healthcare professionals showed better interaction rates and fewer rejections. 60% of videos on pharmacological treatment of obesity were considered useful. Conclusion: it is necessary for educational institutions, health institutions and health professionals to be part of the network in a more significant way, so that the population has access to safe, objective and quality information.

**KEYWORDS:** Drug therapy. Health communication. Internet. Obesity. Social media.

**RESUMO:** Avaliar as informações sobre o tratamento da obesidade disponíveis no YouTube. Métodos: estudo é transversal com coleta realizada no dia 20 de setembro de 2021. Os dados foram categorizados conforme o perfil do responsável. Avaliada presença de interesse comercial e qualidade das informações através do instrumento Brief DISCERN. Resultados: 89,8% da amostra não foi identificado público-alvo específico para a informação. Profissionais de saúde foram os responsáveis em 59,3% da amostra. Vídeos com maior número de visualizações foram aqueles publicados por emissoras de TV, bem como as maiores aprovações. O conteúdo publicado por profissionais de saúde apresentou melhores índices de interação e menores reprovações. 60% dos vídeos sobre tratamento farmacológico da obesidade foram considerados úteis. Conclusão: é necessário que instituições de ensino, instituições de saúde e profissionais de saúde insiram-se de forma mais significativa na rede, de forma que a população tenha acesso a informações seguras, objetivas e de qualidade.

**PALAVRAS-CHAVE:** Comunicação em saúde. Internet. Mídias sociais. Obesidade. Tratamento Farmacológico.

## INTRODUCTION

The use of the internet for health information searches has become a common and essential practice in the digital age.<sup>1</sup> The accessibility and vast amount of information available online allow individuals to quickly and conveniently find answers to their health-related questions.<sup>2</sup>

A study conducted by Silva and colleagues (2019) in Goiás found that 64.8% of participants reported searching for information about the health-illness process online, with a predominance of women aged between 18 and 28 years.<sup>3</sup> The national survey ICT Households 2023 (Information and Communication Technologies in Brazilian Households) confirms these findings, identifying that 58% of respondents use the internet to seek health information.<sup>1</sup>

YouTube is the world's most popular video-sharing platform. More than 1 billion hours of video are streamed daily on the site, which is visited by over 2 billion unique users each month.<sup>2</sup>

Reports released by Hostinger, a global website popularity ranking platform, on internet user behavior in 2023 and 2024 provide an assessment of trends and the ranking of the most accessed websites in Brazil and worldwide, based on web traffic data. According to the results, YouTube ranks second globally, with over 32 billion visits per month, and second in Brazil, with 1.407 billion monthly visitors. In both cases, it follows only behind Google, which leads with 87.04 billion monthly visits worldwide and 4.589 billion in Brazil.<sup>4</sup> However, this ease of access also presents significant challenges that must be considered.

Reuters reports that information sources are predominantly found online (83%), with YouTube being the most used platform for news consumption (43%) and the second most used for general purposes (77%), trailing only WhatsApp (78%).<sup>5</sup>

Although there is a vast amount of information available on the internet, not all content consumed by users is reliable. A study analyzing YouTube content on acute myocardial infarction across 242 videos identified inaccurate data and concluded that the quality of the videos ranged from low to moderate.<sup>6</sup>

A study on Covid-19 vaccines found that most videos were considered non-educational, with low to moderate quality according to the DISCERN criteria.<sup>2</sup> Similarly, using the same instrument, Dalpoz and colleagues (2022) studied dental caries prevention and concluded that most videos had moderate quality and low reliability due to a lack of transparency regarding the sources of the information presented.<sup>7</sup>

Even though the internet is a valuable instrument for disseminating knowledge, raising awareness, and promoting healthy behaviors among the population, there are risks involved. Anyone can publish content on the platform, meaning that inaccurate or misleading information can spread rapidly.<sup>8</sup>

Moreover, the lack of regulation and the difficulty in verifying the credibility of content creators, along with the inefficiency of digital platforms in removing false information to combat misinformation, can contribute to the dissemination of incorrect data. This may lead to misdiagnoses and unreliable treatments.<sup>9,10</sup>

Obesity is considered a public health issue and a significant risk factor for the development and worsening of various non-communicable diseases (NCDs).<sup>11</sup> In 2016, the World Health Organization (WHO) estimated that over 1.9 billion adults worldwide, aged 18 years or older, were overweight. Among them, more than 650 million were classified as obese.<sup>12</sup> It is currently estimated that nearly one-third of the global population may be classified as overweight or obese. If current trends persist, this figure could reach 57.8% by 2030.<sup>13</sup>

The dissemination of health information via the internet, especially on widely accessible platforms such as YouTube, can significantly influence people's knowledge and behaviors regarding obesity and its treatment. Some authors have evaluated the platform as an important ally in the fight

against obesity.<sup>14,15</sup> However, several studies have identified moderate to low quality in the information about obesity treatment available on digital platforms.<sup>16,17,18</sup> This appears to be a global issue. Although the present study focuses on publications in Portuguese, another study analyzing American and Italian websites addressing obesity also found that the quality of the available information was low.<sup>19</sup> This concern is not limited to pharmacological treatment, as the internet and social media provide access to a wide range of topics related to obesity, including aesthetic and surgical procedures, alternative therapies, nutritional supplements, and more.

Given the significance of obesity as a public health issue and the challenges associated with the quality of health information online, it is crucial to assess the quality of YouTube videos on obesity treatment.

## METHODS

This methodological design of this study is cross-sectional, aiming to evaluate the quality of the information presented in YouTube videos about obesity and its pharmacological treatment.

The selection of videos on the YouTube platform was conducted on September 20, 2021, via the URL [www.youtube.com](http://www.youtube.com), using the keywords "obesity and treatment." Filters were applied for content type (video), publication date, and sorting by view count. The 100 most-viewed videos in Portuguese were retrieved.

The exclusion criteria included videos longer than 20 minutes, those with technical issues preventing playback, duplicates, videos not specifically addressing obesity, and those exclusively focused on surgical treatment.

After applying the exclusion criteria, the selected videos were fully watched and categorized according to the profile of the content creator: educational institutions, government institutions, healthcare professionals, TV networks/ news channels, health channels, personal profiles, non-governmental research, and news dissemination channels. Channels created by authors who identified themselves as independent healthcare professionals or those affiliated with healthcare institutions (clinics, institutes, and hospitals) were classified as "healthcare professionals." Channels that presented themselves as providers of health-related information but without a registered healthcare professional or institution were categorized as "health channels." Channels that published third-party content were classified as "news dissemination channels."

Additionally, the presence of commercial interest associated with video publications was assessed. A video was classified as commercially linked when advertisements promoting products or services were observed.

Regarding the target audience, videos were categorized as directed toward children and adolescents, adults, healthcare professionals, or unspecified.

The analysis of the quality of information available in videos addressing the pharmacological treatment of obesity was conducted using the Brief DISCERN instrument, developed by Khazaal and colleagues (2009)<sup>20</sup> (Chart 1). This instrument is a condensed version of the original DISCERN, consisting of six questions that assess references and dates of the information, treatment description, benefits, risks, and effects on the patient's quality of life. Each topic is evaluated using a 5-point Likert scale, where a score of 5 indicates that the evaluation criterion was met, scores between 2 and 4 indicate partial compliance, and a score of 1 indicates non-compliance.

The evaluation using this instrument was conducted independently by two reviewers (JQMC and JDSC).

**Chart 1.** Brief DISCERN Questionnaire applied in the study.

Questions	
1	Is it clear which sources of information were used for the texts and to compile the video?
2	Is it clear when the information used or reported was produced?
3	Does it describe how each treatment works?
4	Does it describe the benefits of each treatment?
5	Does it describe the risks of each treatment?
6	Does it describe how treatment options affect overall quality of life?

Source: Adapted from Khazaal et al. (2009).

The scoring criteria were based on information approved by the Brazilian Health Regulatory Agency (ANVISA) for the package inserts of medications and the information provided in the Brazilian Obesity Guidelines.<sup>1</sup>

For data analysis, all results were organized in a spreadsheet using Microsoft Office Excel 2016. The popularity of the videos was calculated following the criteria suggested by Hassona et al. (2016) and Oremule et al. (2019).<sup>22,23</sup> According to the authors, audience engagement is assessed based on the interaction index, which relates the like-to-view ratio, adjusted for the number of "dislikes" received, and the view rate, calculated as the total number of views divided by the number of days since the video was uploaded, as presented in Chart 2. The total number of days available corresponds to the sum of the available days for each video.

**Chart 2.** Formulas used to calculate audience engagement.

$\text{Interaction Index} = ((\text{Number of Likes} - \text{Number of Dislikes}) \times 100) / \text{Number of Views}$ $\text{View Rate} = \text{Number of Views} / \text{Number of Days Available}$
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Source: Adapted from Hassona et al. (2016) and Oremule et al. (2019).

Regarding video quality, according to Khazaal and colleagues (2009), videos with a Brief DISCERN score of 16 points or higher are considered high-quality (useful), while those scoring below 16 are classified as misleading (not useful). Thus, videos scoring 16 points or higher were considered useful.<sup>19</sup>

For the analysis of video profiles concerning authorship and the values assigned by the Brief DISCERN instrument, simple and relative frequency measures, mean, and standard deviation were applied as appropriate. For non-parametric data, the median, minimum, and maximum values were calculated and presented.

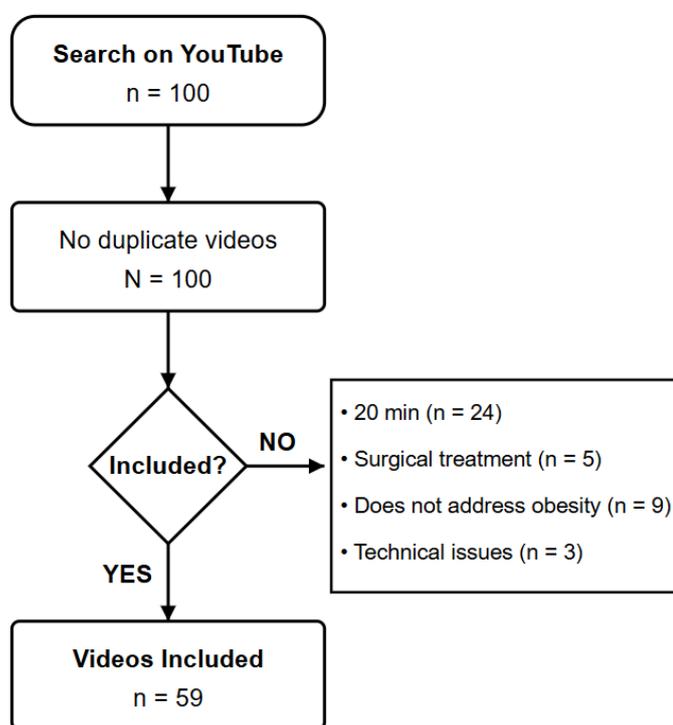
Cohen's Kappa coefficient was used to assess the degree of agreement between the Brief DISCERN results from the two evaluators. Fisher's exact test was employed to analyze the correlation between the variable "video authorship" and classification by Brief DISCERN.

The Shapiro-Wilk normality test was used to assess the normality of the distribution, revealing that the quantitative variables did not follow a normal distribution; therefore, the median value was used. Additionally, the Mann-Whitney test was employed to compare the number of views and popularity between videos classified as misleading and useful. The Kruskal-Wallis test was used to compare descriptive variables among the most frequent YouTube video creators. Spearman's correlation coefficient was used to assess the existence of a linear relationship between duration, number of views,

available days, number of comments, “likes”, and “dislikes”. All analyses were performed using IBM-SPSS statistical software, version 25.0.0 (2017).

## RESULTS

A total of 59 videos (Figure 1) were included for full analysis after applying the exclusion criteria, with an evaluation of the publication source, target audience, presence of commercial interest, and quality of information on obesity treatment. The videos had a total duration of 6 hours and 20 minutes (mean = 06:27, median = 05:14, ranging from 01:01 to 17:51 minutes); 8,024,954 views (mean = 136,016, median = 3,805, ranging from 1,033 to 6,590,420 views); 107,063 likes (mean = 1,814, median = 84, ranging from 0 to 85,690 likes); and 6,210 dislikes (mean = 105, median = 2, ranging from 0 to 5,480 dislikes).



**Figure 1.** Flowchart of the video selection process for analysis.

The videos were available for a total of 91,801 days (mean = 1,556; median = 1,440; range = 131 to 3,872 days). The analysis of video popularity revealed a total view rate of 5,696.8 (mean = 96.6; median = 4.8; range = 0.5 to 4,548.2) and a total engagement index of 162.4 (mean = 2.7; median = 1.9; range = 0 to 15.2).

In 89.8% of the sample, no specific target audience was identified, while the remaining videos (n = 6) were directed at childhood and adolescent obesity.

Regarding the identity of the account that published the videos, healthcare professionals were responsible for 59.3% (n = 35) of the sample, followed by TV networks (15.3%; n = 9) and news dissemination channels (10.2%; n = 6). The "other" category included videos published by health-related channels, personal profiles, and non-governmental organizations. No videos were linked to government institutions.

Only three videos (5.1%) displayed commercial interest, all produced by healthcare professionals (one from a hospital-affiliated channel and two from channels of independent professionals). It is

noteworthy that the commercial interest was related to self-promotion rather than the sale of products or medications.

Table 1 presents the results regarding video popularity based on the identity of the publishing account. The videos with the highest number of views were those published by TV networks (median = 40,375 views; median = 24.2 views/day), as well as those with the highest approval ratings (median = 458 likes). In terms of another popularity metric, videos published by healthcare professionals, which accounted for 59.3% (n = 35) of the sample, exhibited the highest engagement indices (median = 2.2) and the lowest disapproval ratings (median = 1 dislike), despite having significantly fewer views (median = 2,987 views; median = 5.6 views/day).

**Table 1.** Distribution of characteristics/popularity of YouTube videos on obesity and treatment in Portuguese, based on the identity of the uploading account (n=59).

Characteristics/ popularity	Educational institutions (n=4)	News dissemination channels (n=6)	Healthcare professionals (n=35)	TV networks/ news channels (n=9) T (Md)	Others (n=5)
<b>Duration</b>	00:24:38 (00:05:26)	00:38:54 (00:07:15)	03:30:45 (00:05:10)	01:09:08 (00:06:19)	00:37:17 (00:04:59)
<b>Approvals ("Like")</b>	251 (53)	4.295 (38)	9.864 (84)	89.531 (458)	3.122 (52)
<b>Disapprovals ("Dislike")</b>	13 (2)	245 (4)	284 (1)	5632 (17)	36 (2)
<b>Views</b>	11.932 (3.158)	680.883 (6.159)	451.396 (2.987)	6.826.712 (40.375)	54.031 (7.656)
<b>View rate</b>	10,5 (1,6)	362,2 (2,2)	523,2 (5,6)	4.758,2 (24,2)	42,1 (3,2)
<b>Interaction index</b>	7,4 (1,5)	3,13 (0,5)	119,64 (2,2)	15,6 (1,5)	16,6 (1,4)
<b>Days online</b>	7.448 (2.185)	16.315 (3.032)	41.395 (881)	14.039 (1.670)	12.604 (2.922)

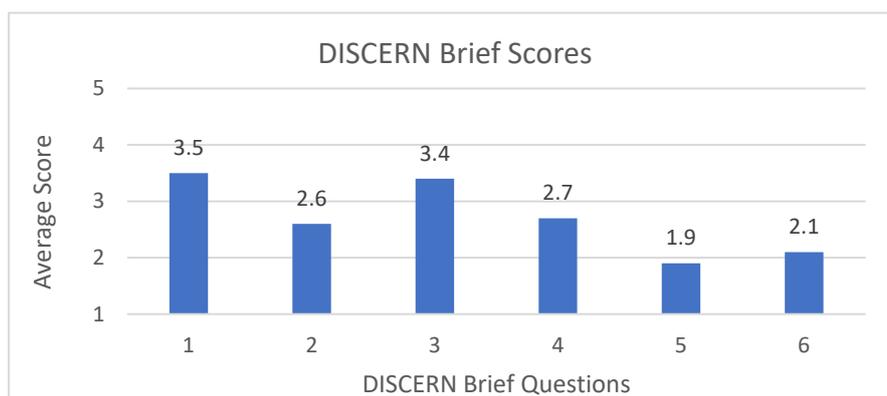
T = Total Value; Md = Median. Source: Authors.

Only two characteristics showed a statistically significant difference among the groups responsible for the videos: the interaction index ( $X^2(4) = 12.091$ ;  $p < 0.05$ ) and the number of days available online ( $X^2(4) = 15.690$ ;  $p < 0.05$ ). Videos uploaded by healthcare professionals had higher interaction indices and fewer days available compared to those published by news dissemination channels ( $p = 0.007$  and  $p = 0.013$ , respectively).

Spearman's test revealed a moderate positive correlation between the number of views and the number of "likes" ( $\rho = 0.512$ ;  $p < 0.001$ ) as well as "dislikes" ( $\rho = 0.624$ ;  $p < 0.001$ ). Additionally, a strong positive correlation was found between the number of approvals and disapprovals ( $\rho = 0.710$ ;  $p < 0.001$ ). Conversely, a weak positive correlation was observed between video duration and the number of "likes" ( $\rho = 0.262$ ;  $p = 0.045$ ). Regarding the number of days available, a weak negative correlation was identified with the number of approvals ( $\rho = -0.294$ ;  $p = 0.024$ ), and a moderate negative correlation with the interaction index ( $\rho = -0.540$ ;  $p < 0.001$ ), according to the classification described by Dancey and Reidy (2013).

The quality assessment of information on obesity treatment was possible for only 10 videos, which provided information on pharmacological therapy. These videos discussed medicinal treatments using Semaglutide, Liraglutide, Orlistat, Sibutramine, Lorcaserin, and the HCG hormone (human

chorionic gonadotropin). Figure 2 illustrates the average scores obtained in the analysis of the 10 videos for each of the six questions in the Brief DISCERN instrument.



**Figure 2.** Average score for each of the six questions in the Brief DISCERN instrument (n=10). Source: Authors.

Questions 1 and 3 had the highest average scores (3.5 and 3.4, respectively) (Figure 2), indicating that the videos focused on providing information about the sources used to create the content and explaining how each treatment works. However, the lowest average score (1.9) was found for Question 5 (Does it describe the risks of each treatment?), highlighting a recurring gap among content creators in adequately warning about the risks of each treatment. Most of these videos were published by healthcare professionals (80%), while the remaining were uploaded by TV networks/ news channels (10%) and news dissemination channels (10%).

As shown in Table 2, six videos were classified as useful (60%), with a median score of 18 and a maximum score of 22. Of the total useful videos that addressed pharmacological treatment, five were produced by healthcare professionals and one by TV networks/ news channels. Among the four videos classified as misleading (median = 12), three were published by healthcare professionals and one by news dissemination channels.

**Table 2.** General Characteristics of YouTube Videos on Pharmacological Treatment for Obesity According to the Brief DISCERN Classification (N=10).

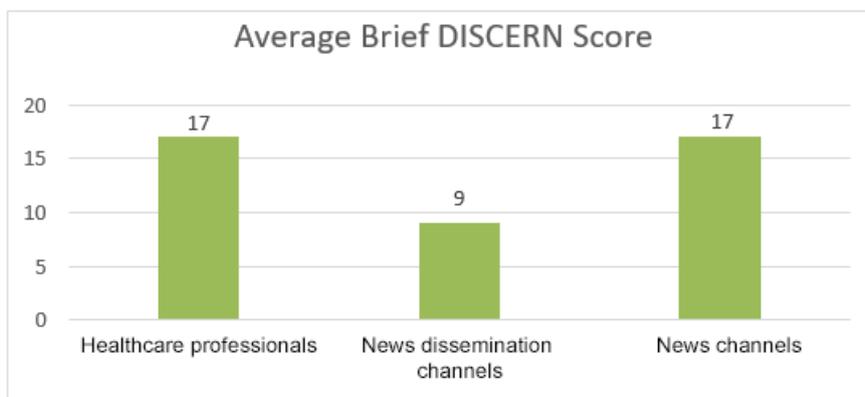
Videos	Brief DISCERN Classification							
	Useful				Misleading			
	N	%			N	%		
	6	60			4	40		
General characteristics	Total	Md	Min	Max	Total	Md	Min	Max
<b>DISCERN Score</b>	114	18	16	22	48	12	9	15
<b>Duration</b>	00:48:30	00:05:57	00:03:50	00:14:40	00:20:08	00:04:45	00:02:27	00:08:12
<b>"Like"</b>	726	126	55	171	203	44	21	93
<b>"Dislike"</b>	15	2	0	5	4	1	0	2
<b>Views</b>	26473	3434	1602	11270	7632	1533	1033	3533
<b>View rate</b>	106,2	10,6	1,1	51,5	7,7	1,0	0,9	4,8
<b>Interaction index</b>	21,6	3,3	1,2	6	14,8	2,6	0,6	8,9
<b>Days online</b>	2764	310	212	1392	6798	1790	216	3002

Md = Median; Min = Minimum value; Max = Maximum value. Source: Authors.

Useful videos had significantly higher numbers of views, view rates, and likes compared to misleading ones. However, no statistically significant difference was observed in the interaction index

between the two groups. Another relevant point is that misleading videos remained online for a longer period (median = 1,790 days) compared to useful videos (median = 310 days).

The analysis of the average Brief DISCERN score (Figure 3) by content creator showed that healthcare professionals and TV networks/ news channels obtained the same score. It is worth noting that healthcare professionals published more videos than these two other categories.



**Figure 3.** Mean Brief DISCERN scores by upload source (n=10).  
Source: Authors.

## DISCUSSION

In the digital era, video-sharing platforms are a popular source of information dissemination, with YouTube standing out as the second most visited website globally and accessed by 96% of Brazil's online population.<sup>25,26</sup> It has gained prominence as a platform for disseminating health-related information, including among younger audiences, serving, for example, as a source of information on medications.<sup>27,28</sup> Within this context, the present study aimed to assess the quality of information available on pharmacological treatment for obesity.

The findings indicate that, on YouTube, the topic of obesity and its treatment is addressed without a clear target audience and without concern for specifying when the information was produced. The absence of information regarding the date of content creation was also observed in most videos (87.8%) analyzed in a study by Ramos and colleagues (2020)<sup>29</sup> on Covid-19-related content.

Garbin, Guilam, and Pereira Neto (2012) consider the internet a potential ally in developing health promotion initiatives, particularly in fostering personal skills.<sup>30</sup> This study identified that healthcare professionals are the primary content creators on YouTube regarding obesity and its treatment. Studies analyzing videos on breast and oral cancer have reported similar findings, demonstrating that these professionals have increasingly used this platform to disseminate health-related information.<sup>31,22</sup>

No video analyzed in this study was published by a governmental institution. In a country where public healthcare plays a significant role, the absence of content on this topic from government institutions is concerning and warrants deeper analysis. It is essential to reflect on the systemic barriers that hinder the dissemination of quality information or reduce its visibility. Several factors can be considered, such as the lack of resources allocated to this activity, the socio-historical context of content production and publication—such as videos released during the Covid-19 pandemic—the difficulty in accessing distribution platforms, or the predominance of algorithms that prioritize popularity over quality.<sup>32</sup> The study by Lopes and Brotas (2024) supports this socio-historical perspective, suggesting that, in the face of a public health

event as significant as the Covid-19 pandemic—marked by uncertainty and widespread politicization—risk perception influenced information consumption behavior on the platform.<sup>33</sup>

To address this issue, it is necessary to encourage and support content production from reliable sources. This may include policies that promote media literacy, regulate distribution platforms to increase the visibility of high-quality content, and promote initiatives that verify the accuracy of information. In this context, Ramos and colleagues (2020b) highlighted the significant potential of Brazil's national network of drug information centers in producing educational videos on the rational use of medications. This network, composed of specialized institutions and trained professionals, represents a reliable and authoritative source of drug information that can be strategically leveraged to improve the quality of information available to the public.<sup>29</sup>

The Educational Institutions category produced the least amount of content (n=4), with the lowest viewing and interaction rates. A similar result was observed in Fontoura's (2020) research, which found that productions from public or university institutions were insignificant in a qualitative and quantitative analysis of YouTube videos. The study concluded that academia needs greater involvement in these spaces for content production and narrative discussions.<sup>34</sup>

This finding can be explained by the fact that educational institutions often face budgetary constraints that limit their ability to invest in digital content production. Resource allocation tends to prioritize teaching, research, and extension activities, leaving content creation for platforms like YouTube as a secondary concern. Additionally, educational institutions, which typically produce more technical and educational content, may struggle to compete with content creators who better understand and optimize platform algorithms. Manso's (2020) study supports this scenario, stating that one of the major challenges of video production in Brazilian universities has been and continues to be overcoming structural and financial difficulties. These conditions negatively affect the regularity and quality of productions.<sup>35</sup>

Regarding the content covered in the analyzed videos, most briefly and superficially discussed the clinical treatment of obesity (physical exercise, diet, and medication). Those that focused on a specific aspect primarily addressed dietary and pharmacological treatment. Only 10 videos covered pharmacological treatments. This suggests that the predominant discussion on this platform aligns with the treatment recommended by the 2016 Brazilian Obesity Guidelines, which emphasize lifestyle modifications (nutritional guidance and physical exercises) and adjuvant pharmacological treatment.<sup>21</sup>

It is worth noting that in the media presenting pharmacological treatment (n=10), sibutramine, orlistat, liraglutide, semaglutide, and human chorionic gonadotropin (HCG) were suggested as medicinal alternatives. However, according to the literature, only the first three options were approved in the country for the treatment of obesity at the time.<sup>20</sup> The systematic review conducted by Madathil and colleagues (2015) had already pointed out that YouTube videos were used to promote therapies and medications not yet approved by regulatory agencies.<sup>27</sup>

Authors who identified themselves as healthcare professionals stood out the most in producing videos about pharmacological treatment of obesity (80%), with 62.5% considered useful, compared to TV networks and personal profiles. However, it is noteworthy that although they produced more quality content, a still high percentage (37.5%) of the videos produced by these healthcare professionals were considered misleading. This can be explained by the study's limitation, in which the sample size applicable to Brief DISCERN was low (n=10), as professionals are generally associated with creating higher quality and reliable information videos.<sup>29,36</sup>

The lowest scores in the DISCERN criteria occurred in the last two questions, which address treatment risks and quality of life. The study showed that the authors did not adequately inform about the inherent risks of each treatment or how the treatment options would affect quality of life. Furthermore,

they did not provide support information for shared decision-making. A similar result was demonstrated in Dalpoz's (2022) research, in an evaluation of the quality of educational videos about dental caries on YouTube, in which, although the average DISCERN score was above average, most videos did not inform about the impact of treatment on quality of life or provide support for shared decision-making.<sup>7</sup>

Videos published by news channels and healthcare professionals had the highest number of views. The former were viewed almost twice as many times as the latter group. However, the interaction index, which relates the like-to-view ratio, was significantly higher for videos published by healthcare professionals. These results are confirmed by the studies of Ramos (2020b) and Hassona (2016), which indicate that videos published by healthcare professionals typically present more useful information for users, leading to a better interaction index.<sup>29,22</sup>

The greater reach that news channels normally have may explain the higher viewing rate for this category, as they disseminate information on various topics.

According to the Spearman's test, the research showed that the number of views has a direct positive linear relationship with the number of likes and dislikes. In other words, videos with higher numbers of views are the most liked and disliked. A strong positive correlation was also identified between the number of likes and dislikes. Similar findings were reported by Dalpoz (2022). In this study, the Pearson coefficient showed that the videos with the highest views were the ones that received the highest numbers of likes, dislikes, and comments.<sup>7</sup>

Editorial freedom and anonymity allowed in the digital world permit the sharing of information without any quality assessment. Therefore, it is not uncommon to find incomplete, contradictory, incomprehensible, and even incorrect information. In the health context, the dissemination of such low-quality content can have significant impacts, leading individuals to make choices that may harm their health.<sup>36</sup> Given this, one limitation of the research was not assessing the quality of the information disseminated in all the analyzed videos.

Although it was not the study's objective, it was observed that little is discussed about surgical treatment, as only four videos were excluded for presenting this approach. This gap may be addressed in future research using alternative search terms to analyze the nature of the information available on this topic. Findings from bariatric surgery websites, where contradictory messages encouraging surgical intervention were identified, highlight the importance of understanding what is being discussed on this subject online.<sup>38</sup>

Finally, in terms of public health, aspects such as health promotion and disease prevention are essential to ensuring population well-being. Regarding obesity, disseminating information via the internet and social media can be an important and far-reaching tool. However, it is crucial that the shared content is of high quality and based on robust scientific evidence. In this sense, it is expected that studies like this, as well as others that have identified low-quality information, will contribute to health education initiatives aimed at improving digital literacy. Additionally, these findings may serve as alerts to the population, encouraging critical thinking when engaging with information on social media.

## CONCLUSION

The present study, by evaluating the quality of videos available on YouTube about obesity treatment, provides evidence of this platform's potential role in delivering health information, contributing to the health communication literature.

The research showed that videos from healthcare professionals, despite having fewer views, demonstrate higher interaction and lower rejection rates, indicating more qualitative audience engagement. On the other hand, videos from TV networks attract more views and approvals, possibly due to their greater exposure and reach. Although useful videos performed better in terms of views and approval, they did not stand out in the interaction index compared to misleading videos. The longer online presence of misleading videos may contribute to their dissemination despite their less reliable content. The equality in Brief DISCERN scores between videos from healthcare professionals and TV networks/ news channels suggests that both groups maintain a similar quality standard in the information provided.

However, the study identified significant gaps in the dissemination of information on the platform, requiring further investigation. The absence of videos from governmental institutions in a severe public health scenario is alarming and calls for an in-depth analysis to identify and overcome systemic barriers. The category of Educational Institutions produced the least content. It is crucial to understand and address the challenges that limit the dissemination of quality information by reputable and capable entities such as universities and research centers. The study highlights the need to improve the clarity and targeting of content related to obesity and treatment, ensuring that the information is accurate and relevant to the target audience.

The quality of information, as demonstrated by this study, is insufficient in a large portion of the analyzed videos. In this regard, some measures need to be taken to mitigate the damage caused by the dissemination of misinformation. Some key strategies include enhancing education—particularly school-based education—with a focus on digital literacy; training healthcare professionals and educational institutions in content production for social networks; and regulating social networks to hold them accountable for the content disseminated. It is hoped that, in this way, it will be possible to promote a healthier social media environment with high-quality health information and foster users' critical thinking in assessing the credibility of information found on social networks.

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