Revista Bioética
Print version ISSN 1983-8042 | On-line version ISSN 1983-8034

Rev. Bioét. vol.34 Brasília 2026

Bioethical challenges of lip filler content on TikTok

Victória Hanel Dezan [1], *Pietra Franke de Oliveira* [1], *Kátia Sheylla Malta Purim* [1], *Thiago Arahn Detoni* [1], *Renato Nisihara* [1]

1. Universidade Positivo, Curitiba/PR, Brasil.

Abstract

Use of social media as a source of health information is increasingly concerning, especially regarding the quality and ethical standards of disseminated content. Thus, this study evaluated the reliability and ethical aspects of TikTok videos related to hyaluronic acid lip fillers. This cross-sectional descriptive study analyzed 150 videos identified using the search term "lip fillers," published between December 2024 and January 2025. Engagement metrics, disclosure of professional credentials, technical execution, compliance with biosafety standards, informational content, use of before-and-after images, and user feedback were assessed. Over half of the content creators did not disclose their professional background and only a few reported professional registration credentials. Although most videos showed basic biosafety measures, technical shortcomings and a lack of educational content were frequently observed. Moreover, the widespread use of before-and-after images revealed ethical noncompliance, reinforcing the need for greater oversight and regulation.

Keywords: Lip augmentation. Hyaluronic acid. Containment of biohazards.

Resumo

Desafios bioéticos do conteúdo sobre preenchimento labial no TikTok

O uso das redes sociais como fonte de informações sobre saúde é situação cada vez mais preocupante, principalmente em relação à qualidade e ética dos conteúdos divulgados. Assim, este estudo avaliou a confiabilidade e aspectos éticos de vídeos sobre preenchimento labial com ácido hialurônico publicados no TikTok. Trata-se de pesquisa transversal e descritiva com 150 vídeos identificados pelo termo "*lip fillers*", publicados entre dezembro de 2024 e janeiro de 2025. Foram considerados engajamento, divulgação de credenciais profissionais, execução técnica, conformidade com normas de biossegurança, conteúdo informativo, imagens de "antes e depois" e *feedback* dos usuários. Mais da metade dos criadores não informou formação profissional e poucos relataram registro profissional. Embora a maioria das gravações apresentasse medidas básicas de biossegurança, observaram-se falhas técnicas e escassez de conteúdo educativo. Além disso, a frequência de imagens "antes e depois" evidenciou inconformidades éticas, e os resultados reforçam a necessidade de mais fiscalização e regulamentação.

Palavras-chave: Preenchimento labial. Ácido hialurônico. Contenção de riscos biológicos.

Resumen

Desafíos bioéticos de los contenidos sobre relleno labial en TikTok

El uso de las redes sociales como fuente de información sanitaria genera preocupaciones sobre la calidad y la ética de los contenidos difundidos. Este estudio evaluó la confiabilidad y los aspectos éticos de videos sobre relleno labial con ácido hialurónico publicados en TikTok. Se realizó un estudio transversal y descriptivo de 150 videos identificados mediante el término "*lip fillers*", publicados entre diciembre/2024 y enero/2025. Se evaluaron la interacción de los usuarios, divulgación de credenciales profesionales, ejecución técnica, cumplimiento de normas de bioseguridad, contenido informativo, uso de imágenes de "antes y después" y retroalimentación de los usuarios. La mayoría de los creadores no informó su formación profesional y pocos reportaron registro profesional. Las publicaciones, en general, presentaron medidas básicas de bioseguridad, pero se observaron fallas técnicas y escaso contenido educativo. Las imágenes de "antes y después" frecuentemente revelan incumplimientos éticos, y es necesario más supervisión y regulación de estos contenidos.

Palabras clave: Aumento de labios. Ácido hialurónico. Contención de riesgos biológicos.

The authors declare no conflict of interest.

Research

Brazil ranks second worldwide in cosmetic procedures, behind only the United States [1]. In 2022, international associations recorded over 971,000 non-surgical procedures, mainly involving botulinum toxin and hyaluronic acid (HA), commonly used in lip fillers [1]. HA constitutes a non-permanent dermal filler composed of repeating disaccharides of glucuronic acid and N-acetylglucosamine. Naturally produced by mesenchymal cells, it is biocompatible, non-toxic, and exhibits minimal immunogenicity. Due to its strong hydrophilic properties, HA attracts and retains water thereby allowing small amounts to create substantial volumizing effects in treated tissues, making it highly suitable for cosmetic use [2].

Cosmetic procedures like lip filling have gained popularity for being considered minimally invasive [3]; but despite its aesthetic appeal, lip filling involves the anatomically complex perioral region, requiring technical expertise to avoid complications [4]. Although adverse events occur in only about 0.5% of cases, they may include ischemia, necrosis, infection, and allergic reactions, whereas mild and transient effects like pain, bruising, and edema are common [5]. With the widespread use of social media, platforms such as TikTok—currently amassing over 91 million users in Brazil—have become major sources of health information [6]. Yet, the lack of quality control and rapid dissemination mechanisms contribute to misinformation: studies show that up to 40% of health-related posts on TikTok contain inaccurate information [6-8].

Lip augmentation has gained significant attention on social media where professionals frequently promote their services and knowledge [9]. Easy posting allows anyone to share content, regardless of expertise, as long as community guidelines are not violated [10]. TikTok's structure further reinforces engagement with idealized beauty standards through filters and viral trends. Research has shown a correlation between exposure to aesthetic content and the willingness to undergo cosmetic procedures [11]. Such a phenomenon, fueled by social media expansion, has normalized the use of dermal fillers—particularly for lip enhancement—among younger individuals who view them as accessible and convenient. However, this growing popularity raises safety concerns as many users are exposed to misleading information and potential health risks associated with unqualified practice.

Moreover, lip filling with hyaluronic acid (HA) is not a risk-free procedure and should therefore only be performed by duly qualified professionals, in accordance with current legal and ethical limits. Growing involvement of unqualified individuals and the consequent trivialization of the procedure have garnered significant discussion and concern among the scientific community [12]. Given this context, this study evaluated the quality and reliability of information about HA lip filling available on TikTok, assessing information about the professional' profile and their area of training.

Method

A descriptive cross-sectional study was conducted by initially searching for "Top" videos on the TikTok platform using the term "lip filling", as this category gathers the most popular and prominent content on the social network based on engagement metrics.

Eligibility criteria consisted of videos produced in Brazil, in Portuguese, by individuals in the health field that were circulating on the studied platform between December 11, 2024, and January 8, 2025. Personal accounts unrelated to lip filling using HA were excluded.

Two independent researchers analyzed 15 videos per day, at 7-day intervals, always at 7 p.m., for 5 weeks, on the following dates: December 11, December 18, and December 25, 2024, January 1st and January 8, 2025.

The following data were collected and tabulated: numerical data, including the number of views, likes, shares, comments (with an assessment of negative ones), and the number of profile followers; information about the promoter's profile, including whether professional training information was provided, professional registration number, and previously reported qualifications; and information regarding the filmed procedure, including whether lip filling with hyaluronic acid (HA) was performed in the video, whether the NR-32 provisions concerning the use of personal protective equipment (mask, gloves, and lab coat) were observed, whether the procedure was performed according to appropriate techniques,

and whether before-and-after images of the procedure were presented.

Regarding the informative content of the videos analyzed, two videos (1.3%) presented dangerous or scientifically unfounded information. Conversely, 46 videos (30.7%) contained information considered appropriate and of good quality, whereas 112 videos (68%) presented no theoretical information about the procedure. Information was considered dangerous or scientifically unfounded if its content was not found on reliable scientific platforms such as PubMed, Cochrane Library, and Open Evidence.

Results

A total of 150 published videos were evaluated during the study period, presenting a high median number of views and likes. Table 1 summarizes the numerical data showing the engagement and impact of the studied videos.

Table 1. Data on engagement with the evaluated videos and the interquartile range

Data	Minimum	Maximum	Median	IIQ
Likes	43	624,100	1479	740-10,775
Comments	0	2442	23.5	9-94
Visualization	253	4,700,000	68,600	31,950-173,525
Shares	4	8,816	200	62-510
Followers	98	259,500	2647	723-12,925

Table 2 provides data on the reported professional background. Regarding the professional profile of the video producers, 54% did not report their professional training; of those who did, most were dentists. Of the total number, 87.3% did not divulge their professional license number.

Table 2. Data on professional training, procedures, and quality of information provided in the evaluated videos (n=150)

Data	%
Inform about professional training (yes)	46.0%
Dentists	66.6%
Biomedical	24.6%
Aesthetician	7.2%
Physician	1.4%
Inform about professional council number (yes)	12.7%
Procedure performed in the video	68.0%
Followed NR-32 regulations	97.1%
Incorrect execution	33.3%
Video content	
Dangerous information	1.3%
Appropriate information	30.7%
Did not provide educational information (only the procedure being performed)	68.0%

Of the 150 videos analyzed, 114 (76%) showed the before and after of the procedure. As for user comments or complaints, 38 videos (25.3%) contained negative feedback, mainly with complaints related to dissatisfaction with the professional's technique and the procedure results.

Discussion

Recent global data reveal a marked and continuous rise in aesthetic interventions, raising growing concern within the medical community. Recent survey reported a 3.4% worldwide increase, totaling approximately 34.9 million surgical and nonsurgical aesthetic procedures performed by plastic surgeons in 2023—over 15.8 million surgical and 19.1 million nonsurgical. Such upward trend has been consistent over the past decade, becoming particularly pronounced since 2021. In the last four years alone, the overall number of aesthetic procedures has surged by nearly 40%, underscoring both the escalating demand for cosmetic enhancements and the need for stricter attention to safety and ethical standards [13]. Despite clear cultural and social differences among countries, which make certain aesthetic procedures more popular in some regions than in others, our findings reveal a substantial global increase in both surgical and nonsurgical interventions aimed at enhancing physical appearance over the past 14 years.

Our results show high engagement, with a large number of views and likes on the analyzed videos, evincing wide exposure of this content among Brazilian users. Regarding the professional profile of the video-posters, most provided no information about their academic background—a concerning finding, as it raises uncertainty about whether these individuals are adequately qualified to perform the procedure.

According to the Federal Council of Medicine (CFM) and medical societies such as the Brazilian Society of Dermatology (SBD) and the Brazilian Society of Plastic Surgery (SBCP), invasive aesthetic procedures like dermal fillers are medical acts that must be performed exclusively by licensed physicians [14]. However, our data reveal that most professionals in the analyzed videos were dentists. The Federal Council of Dentistry (CFO) recognizes orofacial harmonization and authorizes dental surgeons to perform aesthetic procedures in the orofacial region [15]. Other professionals, however, remain in a regulatory gray area, as the Brazilian Health Regulatory Agency (ANVISA) oversees only product approval. Conflicting regulations and judicial decisions create uncertainty about who is legally authorized [16]. Notably, only 12.7% provided a valid professional registration number.

Regarding the performance of the procedures shown in the videos, a high rate of compliance with biosafety regulations was observed; however, when analyzing the execution of the technique itself, one-third of the videos exhibited technical flaws. Some authors have argued that such deficiencies may reflect the diversity of professional backgrounds involved in performing lip filler procedures, in the absence of standardized techniques or specific regulatory guidelines [17].

Despite its favorable safety profile, the use of hyaluronic acid (HA) fillers may lead to adverse reactions, which are generally mild, transient, and reversible. However, more severe complications can also occur, not only due to technical errors but also as a result of the patient's immune response. These may manifest as persistent edema, nodules and indurated plaques, or granulomatous reactions such as sarcoid-like granuloma, foreign body granuloma, or eosinophilic panniculitis. Thus, patient safety depends directly on the practitioner's level of training and on the careful selection and proper handling of the filler materials [18].

Studies have reported that the Brazilian population is exposed to serious complications resulting from aesthetic procedures performed by non-medical professionals. In analyzing 1,058 Brazilian physicians—mainly dermatologists and plastic surgeons—who frequently manage complications from aesthetic treatments [17], the survey found that, on average, each physician treated five complication cases per month, with 17% of these resulting in permanent sequelae. Most common complications included scarring (78.7%), inflammation (72.2%), infection (65.4%), and tissue necrosis (28.9%) [17].

Although many of these complications may occur unpredictably, several measures can significantly minimize their risk. Selecting the appropriate filler and injecting it into the correct anatomical plane, maintaining a sterile

environment, having a thorough understanding of the product's properties, and conducting a comprehensive assessment of the patient's medical history are essential to prevent adverse outcomes. Given that the lips represent an exceptionally dynamic and sensitive area, professionals must exercise caution to avoid overcorrection or using fillers with high G values or low molecular weight and ensure precise placement within the intended tissue layer [19].

A high frequency of "before and after" videos (76%) was observed—a practice that raises ethical concerns, as it may lead the public to a distorted perception of the results and the risks involved. According to the Federal Council of Medicine [20,21], such images must serve an educational purpose and include explanations or captions specifying the indication for the procedure, factors that may influence the outcome, and possible complications. Clearly, these requirements are not being met on social media platforms. Additionally, the widespread use of before-and-after images also raises concerns regarding privacy, confidentiality, and informed consent. Even when patients authorize image disclosure, ethical questions remain regarding the potential exploitation of personal health information for promotional purposes and the influence such images may exert on vulnerable audiences seeking aesthetic interventions.

The high engagement observed reinforces social media's role as an amplifier of health information and the ethical opportunity for qualified professionals to use it responsibly. However, public health risks stem mainly from unqualified content creators. The absence of professional credentials and technical flaws in procedure execution turn social media's educational potential into a patient safety threat. Recommendation algorithms, driven by likes, shares, and watch time, favor popularity over accuracy. This neutrality amplifies low-quality content, replacing evidence-based knowledge. Such exposure encourages impulsive aesthetic decisions, as frequent interaction increases acceptance of cosmetic interventions. The platform's visual appeal further promotes impulsive behavior and ethically questionable practices, including the display of "before-and-after" images.

From a bioethical perspective, the findings of this study extend beyond concerns regarding technical quality and regulatory compliance. Social media platforms such as TikTok have become important sources of health-related information for millions of users, often influencing perceptions and decisions regarding aesthetic procedures [6-8]. The popularity of lip augmentation content is particularly relevant because exposure to aesthetic information on social media has been associated with an increased desire to undergo cosmetic interventions, especially among young adults [9-11]. In this context, respect for individual autonomy requires that decisions be based on accurate, balanced, and evidence-based information. However, when aesthetic procedures are predominantly presented through persuasive visual content, idealized outcomes, and promotional narratives, without adequate discussion of risks, limitations, and potential complications, the conditions necessary for informed decision-making may be compromised [4,18,19].

Furthermore, the principle of non-maleficence may be challenged when incomplete or potentially misleading information contributes to unrealistic expectations or encourages individuals to seek invasive procedures without fully understanding their implications [8,10]. The high frequency of before-and-after images identified in this study is particularly relevant, as the use of such images in health-related advertising is subject to ethical restrictions and must not induce unrealistic expectations regarding outcomes [20,21]. Social media users, especially adolescents and young adults, constitute a vulnerable population due to their greater susceptibility to aesthetic pressures, social validation mechanisms, and idealized beauty standards [11]. Therefore, the ethical responsibility of health professionals and content creators extends beyond technical competence and includes a commitment to truthful, transparent, and socially responsible communication. Promoting reliable health information that respects human dignity, safeguards informed autonomy, and minimizes the risk of harm should be regarded as a fundamental ethical obligation in contemporary digital environments.

This study presents certain inherent limitations. First, being cross-sectional in design, it captures data from a single point in time, which may limit the generalizability of the findings. Second, the constantly evolving nature of digital

platforms – with their vast and continuously increasing volume of uploads and views – makes it challenging to obtain a fully representative and stable dataset. Nevertheless, our data offer valuable insights into current trends and the quality of aesthetic-related information shared on social media in Brazil.

The injection of hyaluronic acid (HA) fillers is not devoid of complications, and professionals must be fully aware of both their potential occurrence and appropriate management. A thorough understanding of facial anatomy, precise procedural techniques, and essential safety principles is fundamental when performing lip augmentation with HA. Given the increasing popularity of these procedures and the growing number of inadequately trained practitioners, there is an urgent need for stronger standardization and regulation by competent health authorities to ensure patient safety and protect public health.

These findings can be interpreted through the framework of principlism, particularly the principles of autonomy and non-maleficence, as well as through the concept of vulnerability, which is especially relevant in digital environments where commercial interests, algorithmic amplification, and health-related decision-making frequently intersect.

Final considerations

This study demonstrates that highly popular TikTok content related to lip fillers frequently lacks essential elements of ethical health communication, including transparency regarding professional credentials, balanced discussion of risks and benefits, and educational information grounded in scientific evidence. The widespread dissemination of such content raises concerns that social media may influence aesthetic health decisions through persuasive visual appeal rather than informed understanding. From a bioethical standpoint, these findings reflect challenges involving autonomy, non-maleficence, and professional responsibility. When health-related information is presented primarily as marketing content, users may be exposed to distorted perceptions of safety, efficacy, and expected outcomes. In this context, protecting individuals from misinformation becomes an ethical imperative. Greater accountability from content creators, professional councils, regulatory agencies, and digital platforms is needed to ensure that health communication in social media promotes informed decision-making, respects human vulnerability, and prioritizes patient welfare over commercial interests.

References

1. International Society of Aesthetic Plastic Surgery. International survey on aesthetic/cosmetic procedures performed in 2022. ISAPS [Internet]. 2022 [acesso 12 out 2025]. Disponível: https://tinyurl.com/4wf7efjc
2. Fagien S. Facial soft-tissue augmentation with injectable autologous and allogeneic human tissue collagen matrix (autologen and dermalogen). Plast Reconstr Surg [Internet]. 2000 [acesso 12 out 2025];105(1):362-73. DOI: 10.1097/00006534-200001000-00057
3. Love M, Saunders C, Harris S, Moon Z, Veale D. Redefining beauty: a qualitative study exploring adult women's motivations for lip filler resulting in anatomical distortion. Aesthet Surg J [Internet]. 2023 [acesso 12 out 2025];43(8):907-16. DOI: 10.1093/asj/sjad050
4. Almeida ART, Renegas R, Boggio R, Bravo B, Braz A, Casabona G *et al*. Diagnóstico e tratamento dos eventos adversos do ácido hialurônico: recomendações de consenso do painel de especialistas da América Latina. Surg Cosmet Dermatol [Internet]. 2017 [acesso 12 out 2025];9(3):204-13. DOI: 10.5935/scd1984-8773.20179302
5. Kar M, Muluk NB, Bafaqeeh SA, Cingi C. Is it possible to define the ideal lips? Acta Otorhinolaryngol Ital [Internet]. 2018 [acesso 12 out 2025];38(1):67-72. DOI: 10.14639/0392-100X-1511
6. Coster H. More TikTok users turning to the app for news, Pew study shows. Reuters [Internet]. Business; 15 nov 2023 [acesso 12 out 2025]. Disponível: https://tinyurl.com/mwfkkx2u

7. Kemp S. TikTok users, stats, data & trends for 2025. Data Reportal [Internet]. Global Digital Insights; 2025 [acesso 12 out 2025]. Disponível: https://tinyurl.com/vyu3vp8h
8. Brewster J, Arvanitis L, Pavilonis V, Wang M. Misinformation Monitor: September 2022. NewsGuard [Internet]. 2022 [acesso 12 out 2025]. Disponível: https://tinyurl.com/44jnc68y
9. Atiyeh BS, Beaineh PT, Hakim CRA, Makkawi KW, Habr NT, Zeineddine JH *et al*. Lip augmentation with soft tissue fillers: social media, perceptual adaptation, and shifting beauty trends beyond golden standard ideals. Plast Reconstr Surg Glob Open. 2024;12(10):e6238. DOI: 10.1097/GOX.0000000000006238
10. Botta SPM, Santos I. Guerra da desinformação: o TikTok como arma. PUC-SP [Internet]. PUC Check; 2025 [acesso 1 out 2025]. Disponível: https://tinyurl.com/yck3nx69
11. Walker C, Krumhuber EG, Dayan SH, Furnham A. Effects of social media use on desire for cosmetic surgery among young women. Curr Psychol [Internet]. 2021 [acesso 12 out 2025];40(3):3355-64. DOI: 10.1007/s12144-019-00282-1
12. Zargaran D, Zargaran A, Terranova T, Khaledi H, Robinson A, Davies J *et al*. Profiling UK injectable aesthetic practitioners: a national cohort analysis. J Plast Reconstr Aesthet Surg [Internet]. 2023 [acesso 12 out 2025];86:150-4. DOI: 10.1016/j.bjps.2023.06.057
13. Triana L, Huatuco RMP, Campilgio G, Liscano E. Trends in surgical and nonsurgical aesthetic procedures: a 14-year analysis of the International Society of Aesthetic Plastic Surgery-ISAPS. Aesthetic Plast Surg [Internet]. 2024 [acesso 12 out 2025];48(20):4217-27. DOI: 10.1007/s00266-024-04260-2
14. CFM e entidades de especialistas apontam procedimentos estéticos invasivos que devem ser feitos apenas por médicos. Portal CFM [Internet]. Notícias; 27 jun 2024 [acesso 11 nov 2025]. Disponível: https://tinyurl.com/3966y5ks
15. Conselho Federal de Odontologia. Resolução CFO-198/2019, de 29 de janeiro de 2019. Reconhece a harmonização orofacial como especialidade odontológica, e dá outras providências. Diário Oficial da União [Internet]. Brasília, 2019 [acesso 14 nov 2025]. Seção 1. Disponível: https://tinyurl.com/4c3ufehz
16. Ministério da Saúde. Agência Nacional de Vigilância Sanitária. Anvisa interdita cosméticos usados irregularmente como injetáveis. Gov.br [Internet]. Notícias; 2023 [acesso 11 nov 2025]. Disponível: https://tinyurl.com/yc6x263b
17. Oliveira GV, Cordeiro AAR, Portela LC, Hexsel D, Palermo E, Ravelli FN *et al*. Impact of unlawful aesthetic practices in brazil: a multicenter survey on complications and the need for regulatory reform. Dermatol Surg [Internet]. 2025 [acesso 11 nov 2025];52(2):164-68. DOI: 10.1097/DSS.0000000000004774
18. Di Santis EP, Hirata SH, Di Santis GM, Yarak S. Adverse effects of the aesthetic use of botulinum toxin and dermal fillers on the face: a narrative review. An Bras Dermatol [Internet]. 2025 [acesso 11 nov 2025];100(1):87-103. DOI: 10.1016/j.abd.2024.04.007
19. Diwan Z, Trikha S, Etemad-Shahidi S, Parrish N, Rennie C. Evaluation of current literature on complications secondary to lip augmentation following dermal filler injection. J Clin Aesthet Dermatol [Internet]. 2023 [acesso 11 nov 2025];16(7):26-33. DOI: 10.1016/j.abd.2024.04.007
20. CFM atualiza resolução da publicidade médica. Portal CFM [Internet]. Notícias; 12 set 2023 [acesso 11 nov 2025]. Disponível: https://tinyurl.com/32u37fes
21. Conselho Federal de Medicina. Resolução n° 2.336, de 13 de setembro de 2023. Dispõe sobre publicidade e propaganda médicas. Diário Oficial da União [Internet]. Brasília, p. 312, 2023 [acesso 11 nov 2025]. Seção 1. Disponível: https://tinyurl.com/4at8jk3r

Victória Hanel Dezan – Undergraduate – victoriahdezan@hotmail.com
0009-0000-0702-1523

Pietra Franke de Oliveira – Undergraduate – pietrafranke@gmail.com
0009-0009-2513-229X

Kátia Sheylla Malta Purim – PhD – kspurim@gmail.com
0000-0001-9982-6408

Thiago Arahn Detoni – PhD – tdetoni@up.edu.br
0000-0002-3510-6492

Renato Nisihara – PhD – renatonisihara@gmail.com
0000-0002-1234-8093

Correspondence
Renato Nisihara – Departamento de Medicina, Universidade Positivo. Rua Professor Pedro Viriato Parigot de Souza, 5300 - Campo Comprido. CEP 81280-330. Curitiba/PR, Brasil.

Contribution of the authors
Victória Hanel Dezan, Pietra Franke de Oliveira and Katia Sheilla Malta Purim: conception; methodology; investigation; formal analysis; writing – original draft; writing – review & editing. Thiago Arahn Detoni and Renato Nisihara: conception; methodology; writing – original draft; writing – review & editing.

Data availability: All data used or generated in this study are described and presented in full in the body of the article.

Editor in charge: Dilza Teresinha Ambrós Ribeiro

Received: 13.1.2026
Revised: 29.5.2026
Approved: 22.6.2026

Research