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Digital Misinformation in Aesthetic Dermatology: The Role of Social Media and Generative Artificial Intelligence in Shaping Patient Safety, Trust, and Evidence-Based Practice: A Narrative Review (2022–2026)

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Abstract

Social media and generative artificial intelligence (AI) are increasingly impacting how patients access, interpret and apply information related to aesthetic dermatology. Both technologies offer an additional medium for education about aesthetic dermatology but have the potential to magnify the impact of misleading and/or incomplete risk disclosure, commercialism, idealized representations of physical beauty and persuasive but unreliable advice. Purpose: This is a narrative literature review of how digital misinformation can affect the safety of patients, the relationship between patients and physicians and evidence-based practices in the field of aesthetic dermatology. Methodology: The research employed a systematic search strategy using the MEDLINE/PubMed database along with the Scopus database. In addition, reference screening was performed manually of all peer-reviewed English language publications identified as relevant to this topic, which were published between January 1, 2022 and March 23, 2026. Due to the variability of the evidence, the studies were synthesized by themes rather than quantitative synthesis. Conclusion: Results indicate that aesthetic dermatology is uniquely vulnerable to misinformation due to the visual persuasion and consumer behavior that influences patient demand for services, patient perceptions of attractiveness and social norms of beauty that are established on platforms. Additionally, social media provides a platform for content that is emotionally provocative and commercially viable, while generative AI enables scalable creation of believable text and synthetic images. As such, both social media and generative AI may generate unrealistic expectations among patients, create barriers to informed consent, undermine the calibration of trust and influence clinical decision-making.

Keywords

Aesthetic dermatology; Digital misinformation; Social media; Generative artificial intelligence; Patient safety; Evidence-based practice

1. Introduction

The digital transformation in health communications with respect to how patients receive, process and respond to medical information has been very impactful. Especially in terms of aesthetic dermatology because the decision-making around what treatments you receive is closely tied to your appearance. Social media sites like TikTok, Instagram, YouTube, Facebook and Snapchat have become the most used sources by users for finding treatment options, getting recommendations about skin care, learning about procedures and selecting physicians. Recent

review articles of literature focused on dermatology suggest that social media can be an effective way to provide patients with information and make information available; but the use of these sites by consumers also exposes them to variable levels of quality of the information they access and may also result in accessing out of context information or commercial advertisements. (Barrutia et al., 2022; Boen et al., 2022; Cooper et al., 2022; Wojtara et al., 2023).

Digital misinformation is very relevant to contemporary aesthetics. Misinformation will be considered broadly in this literature review as an umbrella for overtly false statements, misleading oversimplification of information, overblown claims of effectiveness, selection of outcomes presented, downplaying of adverse effects, anecdotal examples taken out of context and educational content that are economically influenced by marketing. In addition, the dermatological community faces a larger challenge than most because patients may not be able to easily identify whether the material they are viewing was produced by a certified clinician, other types of healthcare providers, professional cosmetic providers, businesses or lifestyle experts. Trepanowski and Grant-Kels (2023) also stated that dermatological advice on social media is particularly susceptible to false advertising and marketing distortion. Additionally, Ouyang et al. (2022) demonstrated that misinformation impacts actual patient interactions with their dermatologists during the course of routine care. Lastly, Vourtsis et al. (2026) found that misinformation about cosmetic/aesthetic surgical/dermatological treatments has implications for patient safety and overall public health.

The above three reasons explain why aesthetic dermatology will be particularly susceptible to social media's influence on patient behavior.

Firstly, as an interdisciplinary area of study, there is competition from within (medicine), from without (consumerism) and from adjacent areas (beauty) for the clinical information that clinicians need to provide to their patients.

Secondly, many of the treatments in this field are preference driven and expectation based and not based on symptoms. Therefore, the definition of both benefits and risks can be influenced by external narrative.

Thirdly, visual judgments are used to measure the outcome of treatments in this field. As a result, before-and-after photographs, filters, image editing software, testimonials and other algorithms utilized by social media platforms can have significant influence on patient decision-making. (Rahman et al., 2024; Mironica et al., 2024).

The public importance of this problem is further enhanced by empirical evidence indicating that the use of social media has become a regular source of information concerning the skin. For example, Cassalia et al. (2023), showed that the general public is heavily reliant on social media as a primary source of information regarding their skin health. They also found that such social media usage was directly correlated with increased awareness and preventative behaviors related to skin health. Similarly, Nigro et al. (2025), demonstrated that there is an enormous amount of dermatological information available through TikTok. However, the reliability and quality of the information being provided is highly variable. Both Almudimeegh et al. (2024)

and Alsatti et al. (2023), identified that the use of social media plays a significant role in determining both the type of skin care routine individuals select and whether or not to undergo cosmetic dermatologic procedures. Specifically, both studies identified that social media use is particularly prevalent among females and individuals who pay particular attention to the reputation of providers based on their online presence. Collectively, the results of these studies indicate that digital information has transitioned from being tangential to the process of seeking aesthetic care, to being an integral component of the pre-clinical environment in which decision-making for treatment occurs.

Furthermore, within this environment, establishing trust is critical. A recent finding that highlights the significance of trust within the context of the digital environment is that trust does not always correlate with visibility. For example, Bal et al. (2025), found that patients suffering from acne tend to trust dermatologists more so than social media influencers. While Bal et al. (2025) suggested that social media influencers play a significant role in developing the "information ecosystem," the distinction made by Bal et al. (2025) is clinically relevant. For instance, patients may report that they trust physicians in theory, however, they may spend significantly more time viewing repeated visual, compelling, and emotionally evocative non-expert content. As a result, aesthetic dermatologists will be meeting with patients that have had their expectations influenced prior to entering into a consultation. Therefore, the clinical encounter is not initiated from a blank slate, but rather from a digitally-mediated narrative that has the potential to contain distortions.

Generative artificial intelligence will continue to shift the dynamics of misinformation as it relates to social media. Misinformation previously was generated by people, commercial accounts and trending topics on specific platforms. However, with generative AI, there are now new ways to generate misinformation; including the generation of text to persuade, provide valid-looking rationales for treatments or products and even create fake images and videos that appear real. In their systematic review, Saeidnia et al. (2026) demonstrated that generative AI has increased the volume, velocity and credibility of health misinformation. Likewise, Park et al. (2025) in a larger scoping review, indicated that large language models produce credible-sounding false information that complicates efforts to mitigate the spread of misinformation. As such, the production of text and synthetic images that look and feel real will contribute to patient belief about the safety, efficacy, outcomes and expertise of their healthcare provider.

The study of the psychology of this area of interest is also considerable. Aesthetic dermatology is not isolated from a social environment in which people compare themselves, see how others look, and monitor their own looks. Laughter et al. (2023) and Gupta et al. (2023) both report a link between using image based social media, and the presence of body dysmorphic symptoms and dissatisfaction with appearance. Ateq et al. (2024), Hussain et al. (2025), and Mironica et al. (2024) found that heavy usage of social media and exposure to digital photo images resulted in a more negative body image appraisal and increased willingness to have cosmetic surgery. While none of these studies provide direct causal evidence, together they support the notion

that platforms focused on appearance can exacerbate clinically relevant vulnerabilities in an aesthetic practice.

The sheer amount of literature addressing how social media and AI have impacted consumer perceptions of their body image and resulting behavioral choices has dramatically increased. However, the vast majority of these studies exist in isolation from each other. This study does not solely focus on dermatology. Rather, this is an example of social sciences. It examines the way platforms are designed (i.e. what makes certain elements of the design visible) the ways in which visual cues create trust, and the effect social media has on how one perceives what is acceptable for appearance and how decisions are made. As such, the review will examine the latest research on how social media and Generative AI contribute to the spread of digital misinformation in aesthetic dermatology and whether that misinformation leads to decreased levels of patient safety and/or confidence in healthcare providers as well as an overall decreased use of evidence based practices.

2. Methodology

This article was prepared as a structured narrative review. Unlike a systematic review or meta-analysis, this type of review will provide an overview of the literature regarding social media and generative artificial intelligence (AI) that contributes to digital misinformation in aesthetic dermatology. In addition, we will examine the impact on patient safety, clinician/patient relationships based on trust, and clinical decision making based on evidence. We chose a narrative approach for our review since the existing literature is comprised of many different types of studies including, but not limited to, cross-sectional surveys, case-control studies, systematic reviews, commentary articles, content analysis of digital platforms, and public health/AI governance reviews. We searched PubMed/MEDLINE as the primary search engine due to its reliability in covering all areas of dermatology, cosmetic medicine, public health, and research in medical communication. As a secondary source we used Scopus to increase the likelihood of retrieving literature at the intersection of the digital society, health communication, and AI. In addition to searching the databases, we manually reviewed reference lists for each paper to locate other relevant studies. We developed a list of keywords combining aesthetic dermatology concepts with those related to misinformation, social media, and generative AI. The aesthetic dermatology-specific search terms included: aesthetic dermatology, cosmetic dermatology, aesthetic medicine, cosmetic procedures, injectables, fillers, botulinum toxin, lasers, skin care/cosmeceuticals. Social media/digital platform-specific terms included: social media, TikTok, Instagram, YouTube, online health information, misinformation, disinformation, misleading information, trust, influencer, and digital literacy. The AI-specific terms included: artificial intelligence, generative AI, large language models, synthetic media, and AI-generated images. We limited our searches to peer-reviewed, English-language publications available from January 1, 2022, through March 23, 2026.

Eligible studies addressed at least one of the following domains: misinformation or misleading information about aesthetic/cosmetic dermatology; the role of digital factors in the behavior of patients seeking treatments or making decisions regarding procedures; the difference in trust

between patients' perceptions of physicians versus those of influencers and/or other online sources; the effect of social media on body image, expectations or the demand for cosmetic treatments; and the potential influence of generative artificial intelligence (AI) in the creation of misinformation in health care, the use of synthetic images, and evidence-based communication. Studies that only evaluated the performance of technical image analysis techniques without regard to their relevance to patients were excluded from this review. Publications outside of the identified time frame, non-English language studies, and studies that had an insufficiently relevant thematic focus were also excluded from the review.

This review utilized predefined selection and synthesis steps although it was not performed as a systematic review under PRISMA guidelines. Titles and abstracts were reviewed for relevance. Abstracts were then reviewed for relevance and potentially eligible full-text studies were selected. All selected studies were categorized into groupings based upon the most prominent theme(s). Studies were not pooled statistically. Ultimately, 27 studies were cited in this review. Of these studies, 24 studies made up the core of the thematic synthesis. Three studies were referenced primarily as contextually relevant and methodologically relevant to the study. Thematic categories were developed iteratively based on the digital environment for information, forms of misinformation, generative AI, patient safety, trust, and digitally mediated expectations.

Table 1. Search Strategy and Eligibility Criteria

Domain Specification

Review design	Narrative review with	with a structured literature search
Databases	PubMed/MEDLINE as the	primary database; Scopus as a supplementary database
Additional Manual identification		backward reference screening of key reviews and original studies
Timeframe	January 1, 2022 to March 23, 2026	
Language and publication type	English	English-language, peer-reviewed literature
Core topics	Aesthetic dermatology	misinformation, social media, generative AI, patient safety, trust, body image
Included Systematic reviews	designs	scoping reviews, narrative reviews, surveys, cross-sectional studies, qualitative studies, content analyses, policy papers
Main exclusions	Non-peer-reviewed	commercial material, purely technical AI studies without patient-facing relevance, non-dermatology studies unrelated to misinformation or safety
Synthesis	Thematic narrative approach	Thematic synthesis organized into seven analytical domains

3. Results

Dermatology's Aesthetic Practices are heavily influenced by a broader digital information ecosystem than a separate medical communications environment. The reviewed literature across dermatology reviews and observational studies has shown that more and more patients are seeking out information on-line about skin-care products, injectable treatments, laser treatments for acne scars, anti-aging techniques, and physician reputations prior to seeking formal treatment from a dermatologist (Boen et al., 2022; Cooper et al., 2022; Cassalia et al., 2023). This pattern is clinically important because the first framing of benefit and risk may therefore occur in a setting shaped less by evidence than by algorithms, aesthetics, brevity, and emotional salience.

Table 2. Representative Studies Included in the Narrative Synthesis

Study **Topi	Design	c** relevance to this	**Main review**	review**	
Vourtsis et al., 2026	Systematic	Misinformation	review	in aesthetic plastic surgery and dermatologic procedures Frames misinformation	tion as a patient-safety and public-health problem.
Saeidnia et al., 2026	Systematic	Generative AI	review	and health misinformation Explains how AI alters misinformation production,	propagation, and mitigation.
Rahman et al., 2024	Systematic	social media, self	review	Social f-perception, and repeat procedures Supports the reinforcement-loop model	relevant to aesthetic care.
Bal et al., 2025	Cross-sectional	study	Trust in dermatology	logists vs influencers Shows that trust may remain physician-centered even	when exposure is not.
Nigro et al., 2025	Platform	-content analysis	Dermatolog	y information on TikTok Demonstrates high volume of dermatology content wi	th variable quality.
Almudimeegh et al., 2024	Cross-sectional	survey	Public	attitudes toward cosmetic dermatologic procedures and skincare Links social	l media use to skincare behavior and cosmetic decision-making.
Seetan et al., 2025	Case-control	study	Social media inf	luence on aesthetic procedures Shows direct influence of social media on p	rocedural decisions.
Ünal et al., 2025	Survey	study	Dermatologist-generated	informative social media content Highlights opportunities and ethical gaps	in physician-created content.
Mironica et al., 2024	Systematic	review	Body image and	cosmetic surgery considerations Connects appearance-focused platforms to d	issatisfaction and cosmetic interest.

3.1. The Digital Information Ecosystem of Aesthetic Dermatology

The aesthetic dermatology field has a unique position as compared to all other medical specialties — because, oftentimes, patients come for an aesthetic procedure based on desire, not a complaint. For this reason, the digital world of aesthetic care is uniquely impactful. According to Rahman et al. (2024), there exists a reinforcement loop, where social media

affects how we perceive ourselves, normalizes the idea of undergoing aesthetic treatments, and generates the interest needed to have additional, repetitive treatments. Social media platforms, according to Rahman et al. (2024), are not simply transmitting information, but are directly involved in creating what we perceive to be desirable for an aesthetic treatment. Similarly, Mironica et al. (2024) found that image-based social media platforms increase both body dissatisfaction and social appearance anxiety by repeatedly exposing us to images that are idealized and digitally altered. This helps explain why aesthetic dermatology is particularly susceptible to the online narrative.

These studies indicate that many people utilize social media as a source of skin health information, and that utilization affects knowledge and preventative behaviors. Furthermore, the TikTok study by Nigro et al. (2025) studied dermatology content on TikTok and determined that there is a substantial amount of dermatology-related information on the platform; however, the quality of the information varies greatly. In addition, the Almodimeegh et al. (2024) study demonstrated that women are particularly frequent consumers of social media for assistance when making decisions regarding both routine skin care and potential cosmetic surgery. Moreover, Alsatti et al. (2023) indicated that users are often influenced by the filtered images they view while utilizing social media platforms and therefore may be more inclined to pursue cosmetic dermatological services. Thus, collectively these studies demonstrate how social media has transformed from merely being a means through which individuals have access to dermatology related information into an environment in which social comparison, commercialization, and evaluations of providers occur.

In addition to the above described features of social media platforms, they are also multimodal. Therefore, users are exposed to various forms of communication including: text based claims, short form video, before and after images, testimonials that are generated by algorithms, recommendations from influencers, and trend driven product demonstrations. A study by Correia et al. (2025) noted that cosmeceutical trends were similarly presented on Google and TikTok, which suggested that social media platforms could be significantly influencing how consumers searched for information and what topics were most salient. As attention is a clinical resource, the fact that trending topics in the feeds are typically the topics that are being discussed during consultations could result in discussions of highly visible procedures, and the lack of focus on the patients' individual needs, the quality of the indications and potential risks associated with long term treatment.

3.2. Forms and Drivers of Misinformation on Social Media

Misinformation in aesthetic dermatology is not typically found to be a matter of overtly false or inaccurate information. Rather, the literature indicates that misinformation about aesthetic dermatology most commonly occurs through misframing. Trepanowski & Grant-Kels (2023) noted that they have seen several common issues with online dermatologic advice including unproven treatment claims, lack of disclosure regarding sponsorship, education masquerading as promotional material, and content from people who do not possess the appropriate credentials for creating content about dermatology.

Ouyang et al. (2022) reported similar findings in their study regarding how patients encounter misinformation within their dermatology practice. They indicated that misinformation about health care is not always in the form of misinformation about treatments but rather, there are many other forms of misinformation such as diet myths, distrust of established treatments, and viral recommendations which oversimplify a solution and ignore the uncertainty associated with the treatment and potential side effects of the treatment.

Due to the fact that commercial interests and educational interests in aesthetic dermatology are so intertwined, aesthetic dermatology content is particularly susceptible to misrepresentation. Many social media platforms incentivize providers to create novel content, provide confident answers to patients' questions, evoke an immediate emotional response, and demonstrate a rapid visual transformation. However, developing an evidence-based treatment plan for each patient requires a nuanced understanding of the individual patient's condition, involves an individualized assessment of the patient's condition, and requires acknowledgment of the inherent uncertainty involved in treating a patient.

Boen et al. (2022) suggested that although social media has the potential to be a useful tool for providers of aesthetic services, the characteristics of social media that make it possible for providers to reach a large audience are the same characteristics that allow non-physicians who are not providing medical care to receive a significant amount of attention. Barrutia et al. (2022) conducted a review of the pros and cons of using social media in dermatology and identified several important ethical, legal and confidentiality-related considerations, all of which are directly applicable to aesthetic dermatology where providers regularly share patient photos, results of treatments, and narrative descriptions of the patient's experience as a means of promoting their own practice.

Another factor contributing to these differences in quality of information are the architectural aspects of the platforms themselves. Engagement based on the nature of the information being ranked tends to favor short, definitive, emotional, and visual content. As such, it appears that these factors will systematically favor information that is not providing the user with a full explanation of the risks, contraindications, need for physical exam, and variability in treatment responses. Both Nigro et al. (2025), and Lammer et al. (2025) have demonstrated that the most visible dermatologic content may not be the most reliable. As such, the public may be receiving an unbalanced "diet" of information. Where dramatic results and simple statements about procedures are rewarded more frequently than rational, evidence-based guidance. The imbalance of information may particularly influence the entire clinical conversation in the field of aesthetic dermatology.

In addition, the studies reviewed above show that misinformation is socially supported. Seetan et al. (2025) identified that individuals that had previously received an aesthetic procedure were more likely to utilize social media; to follow providers or influencers that perform aesthetic procedures; and to participate in social media advertising related to procedures. These findings demonstrate a cycle in which previous aesthetic interest contributes to increased exposure to

similar types of content; thereby, increasing the normalization of interventions, as well as decreasing the perceived number of viable options.

3.3. Procedure-Specific and Consumer-Facing Misinformation in Aesthetic Dermatology

Procedure-based misinformation in Aesthetic Dermatology has a tendency to cluster around the procedures for Injectables, Lasers, Minimally Invasive Rejuvenation, Acne-Scar Treatments, and Skincare Interventions. According to Seetan et al. (2025), Acne-Scarring Treatment was one of the most common types of procedures related to social media in the case control study from Jordan conducted by Seetan et al. (2025). Sindi et al. (2023) also indicated that social media use is related to being more open to Cosmetic Procedures. Most often the procedural messages that patients read online are incomplete; downtime is down-played; discomfort is minimized; reversibility is over-stated; and the necessity of a qualified provider assessing the patient is under-emphasized. This creates a misleading pre-consultation script where the procedures are described as simple consumer upgrades versus Medical Interventions that require a personalized Risk-Benefit Analysis.

Misinformation on cosmeceuticals and skincare routines can extend beyond just the procedure itself. Correia et al. (2025) discovered that cosmetics have received continued and very consistent levels of attention across both Google and TikTok. Also, some ingredients have received higher levels of attention than would be expected based upon their presence within an overall educational context. Almudimeegh et al. (2024) have reported that social media has a significant impact on the practice of skincare and the views consumers have regarding cosmetic dermatological treatments. The reason for this is because educational content related to skincare can act as a gateway into more focused interventions. A user may begin by viewing content related to pore size, texture, hyperpigmentation, or enhancing glow. These users will be directed to additional algorithmically created content about chemical peels, laser treatments, injections, or other cosmetic anti-aging treatments.

The intersection of commerce and education creates a unique challenge in identifying truthful information. Sponsorship recommendations, partnerships with influencers, expert content developed and affiliated with brands, and visually enhanced skin transformations can all look like educational materials, but are ultimately influenced by the sale of products. Trepanowski and Grant-Kels (2023) have cautioned that sponsored dermatologic advice may create un-transparent conflicts of interest. Although in the aesthetic setting, it is possible to present technically correct information, these same technically correct statements can become misleading if they are presented without discussing the limitations of treatment, which candidates are most suitable for treatment, what results a patient can reasonably expect from treatment, or how the possibility of "no treatment" could be the best option for a patient.

There exists another related issue of the prevalence of imagery that is difficult for clinicians to understand. Frequently before-and-after content has not utilized standardized lighting, timing, angles, etc. Additionally, edited photographs, filters, and selective case presentations have the potential to exaggerate perceived outcomes. Many of the studies within the current review

allude to this issue indirectly, but do not utilize a strict methodology of image validation. Therefore, there is a common theme of concern throughout the literature regarding aesthetics and body image. As a result, a media environment has been created where patients will be primed to anticipate significant, low risk and nearly universal improvements when the evidence and real world results are significantly less clear cut.

3.4. Generative Artificial Intelligence as a Multiplier of Digital Misinformation

Generative AI presents an entirely novel problem by making it possible to create high-quality-sounding, potentially credible-sounding, information on a large-scale basis. Systematic reviews of empirical research have shown that generative AI increases both the amount and the speed of health misinformation and users typically find it difficult to determine whether AI-generated content was created by humans. In addition, researchers have found that AI-generated content is not easily detected. Researchers such as Park et al. (2025) have made similar observations in their study about the potential of large language models for generating misleading, credible-sounding content; they have noted however that mitigating this problem will be complex due to inconsistent application of safeguards and contextual dependencies. Generative AI's influence does not stop with the creation of text. It creates synthetic images, edits images using AI-based tools, and creates plausible visual representations of treatments. In aesthetic dermatology, which is particularly influenced by the quality of language used to persuade patients, the nature of patient expectations related to visual outcomes, and the degree to which a provider uses personalized language to connect with each patient, the ability to create a variety of visually-realistic misrepresentations of treatment results creates significant risks. Patients may see photorealistic depictions of the effects of aesthetic dermatologic treatments that are not based on actual clinical results but appear believable simply due to how realistic they look.

In addition, the nature of the labor involved in spreading misinformation has changed. Before the advent of generative AI, creating misleading persuasive content was time-consuming for individuals who had to write, edit, and format their own content. With the advent of AI, the same misleading narrative can now be generated rapidly in bulk form and disseminated across many platforms. This makes it possible for a single commercial entity to spread the same misleading narrative across multiple platforms. While this raises concerns regarding malicious actors who seek to spread misinformation, there are also well-meaning clinicians and clinics that are likely to use these tools to quickly develop educational materials, marketing materials, and other content intended to promote their services without adequate fact-checking, disclosures, and/or ethics-based consideration. Research conducted by Sakunchotpanit et al. (2026) demonstrates that dermatology journals are beginning to establish specific guidelines for the use of GenAI in the publication process; however, the development of these guidelines remains inconsistent in terms of specificity and implementation.

The current body of research related to AI in dermatology has shown that the profession continues to determine what are appropriate norms for trust, disclosure and evidence usage as it relates to human-AI interaction. Both Karadag et al. (2024), and Ünal et al. (2025), point out that dermatologists who are active online will be expected to engage in a manner which

strengthens health literacy and maintains professional standards. This recommendation becomes increasingly relevant in the GenAI era: establishing transparency with respect to what is authored by humans, what is assisted by AI, and what was developed based upon actual patient experiences may very well become an integral component of ethical communication.

3.5. Implications for Patient Safety

In addition to being an image problem, the reviewed body of research indicates that misinformation caused by digital means in aesthetic dermatology will impact the safety of patients. Vourtsis et al. (2026) clearly stated that misinformation in aesthetic plastic surgery and dermatologic treatments was a "public health" issue. Misinformation regarding indications, minimizing adverse reactions, normalizing individuals who are not appropriate candidates for treatment, delaying evaluations for true complications, and suggesting products or procedures that are not suitable for the individual's skin condition, co-morbid conditions, or desires is all possible in aesthetic dermatology settings. This is particularly relevant as most aesthetic treatments are elective. When a procedure is performed in a preference sensitive setting, the accuracy of informed consent depends on both what information is shared within the confines of the medical office, and the patient's informational framework at the time of visit. Therefore, if an individual enters the consultation with pre-conceived notions based on simplistic influencer stories, manipulated images, or artificial intelligence generated reassurances, there may be a significant distortion of the baseline prior to engaging in the formal consent process. Ouyang et al. (2022) provided a practical example of this challenge, and recommended that physicians specifically inquire about whether the patient has accessed misinformation during consultations. The recommendation made by Ouyang et al. (2022), applies equally well to aesthetic medicine where the gap between pre-existing beliefs and the clinical realities are much greater.

Additionally, several studies suggest that social media can influence treatment seeking behaviors in a variety of indirect manners. For example, Almudimeegh et al. (2024) discovered that women often review the social media presence of dermatologists prior to scheduling an appointment. Similarly, Seetan et al. (2025) found that when patients view social media content; they are more likely to support aesthetic advertising and follow practitioners. While these behaviors themselves are not necessarily harmful, they do emphasize the need for how benefits, risks, and qualifications are represented through various forms of online marketing. If social media is used as a form of validation to demonstrate a practitioner's or product's ability to provide quality care; the basis upon which a decision to seek out certain treatments or providers may be less directly associated with the actual safety of those options.

Additionally, another safety concern is of excessive use and escalation. As stated by Rahman et al. (2024), social media exposure has been shown to create a normalization for repeated aesthetic interventions. In some cases, specifically with individuals who have an increased sensitivity to being dissatisfied with their physical appearance or have body dysmorphic symptoms, social media exposure can promote a cycle of procedure use as a means to continually pursue changing digital beauty ideals rather than for achieving permanent and realistic expectations. While it is understood that there is a complex relationship between

exposure to social media and developing problematic behaviors for each individual exposed to social media; the literature supports that social comparison and appearance pressure through social media platforms are important clinical factors (Gupta et al., 2023; Mironica et al., 2024).

3.6. Trust, Professional Credibility, and the Doctor-Patient Relationship

Trust is at the center of the current review as it will influence how a patient interprets information and how a clinician will correct the information. While it is a positive finding that Bal et al. (2025) indicated that patients with acne have a higher degree of trust toward their dermatologist rather than social media influencers; that finding should not be taken too lightly. Simply trusting a dermatologist in principle does not automatically override repeated exposure to non-expert narratives. A patient could express that they have more trust in their dermatologist, yet enter into a consultation with beliefs formed from weeks or months of content on a social media platform. Therefore, misinformation can exist beyond the authority of a physician due to the saturation of the informational environment prior to the initial physician-patient interaction.

As previously discussed, professional credibility is influenced by online behavior. Karadag et al. (2024), Lammer et al. (2025) and Ünal et al. (2025) all support the notion that dermatologists can contribute to improving the accuracy of health information through evidence-based use of social media platforms. However, each study also demonstrates that there is an inequality in the level of professional participation and that awareness of ethical and legal issues remains suboptimal. For instance, Ünal et al. (2025) demonstrated that citations to scientific references were sparse within many dermatologists' own social media postings and that the knowledge base regarding patient-image ethics is incomplete. In addition to considering the generation of misinformation created by outside parties, the medical community must consider how it communicates via social media.

Online misinformation is emotionally impactful to patients. Aesthetic decision-making is typically based upon identity, self-confidence, aging, attractiveness and social acceptance. Therefore, correcting misinformation in an aesthetic-related context is not analogous to correcting a simple factual error. Rather, the clinician may need to address a patient's hope, insecurities, past disappointment and/or the symbolic meaning of the proposed treatment. One reason that digitally mediated misinformation is so challenging to reverse is that the clinician is not only correcting an article or post, but is also attempting to interact with a narrative that has become psychologically and socially meaningful to the patient.

3.7. Digitally Mediated Expectations, Self-Perception, and Demand for Aesthetic Procedures

A primary theme across the literature is the way in which social-media exposure, self-perception, and aesthetic-appeal demand interact. The evidence compiled by Rahman et al. (2024) demonstrates that social media has a substantial impact on beauty standards and reinforces the desire to pursue repetitive aesthetic procedures. Similarly, Mironica et al. (2024), describe how selfie culture, visual aesthetics, and celebrity-driven norms can amplify body-dissatisfaction and lead to increased consideration of cosmetic interventions. Ateq et al. (2024)

demonstrated that heavier social-media usage is correlated with a greater number of adverse self-appraisals of appearance and an increased propensity for cosmetic surgery. Hussain et al. (2025) illustrated a relationship between social media, cultural pressures related to appearance, and attitudes toward cosmetic surgery and body-dysmorphic symptoms in male participants.

These results are important for dermatology as many aesthetic concerns occur in areas where typical variation, visible aging, texture, color and/or transient imperfections are evaluated in light of very idealized notions. Filter and photo editing tools can take what would be considered common variations in facial or skin characteristics and turn them into something that is perceived as pathologic. Alsatti et al. (2023), reported that filter use and social media usage were associated with an increased interest in pursuing cosmetic dermatologic procedures. Furthermore, Gupta et al. (2023) have shown that the use of image-based social media and appearance related motivations are positively associated with body-dysmorphic symptoms. Therefore, in aesthetic consultations, the clinician will likely encounter patients whose request for treatment is not only based upon their own internal standards of what they feel is "normal", but also on the digitally created internal standards of beauty that they have been exposed to. Importantly, the reviewed studies do not support either moral panic or determinism. Social media does not negatively affect all users in the same way. Many individuals view online beauty or skincare content without creating a pathological dissatisfaction. However, the repeated findings across systematic reviews and cross-sectional studies provide sufficient evidence to suggest that the issue is significant enough to be addressed clinically. When patient expectations are unreasonable, unstable, or inextricably tied to comparative self-worth, there is potential for the patient to develop post-treatment dissatisfaction even when the treatment is technically adequate. Therefore, managing patient expectations is not merely a "soft" interpersonal skill located at the fringes of clinical practice. Rather, it is a core component of safe, ethical clinical practice in the digital age.

4. Discussion

The findings of this literature review support the idea that the nature of misinformation about cosmetic treatments in aesthetic dermatology should be viewed as complex and multi-dimensional with connections to medical treatment, platform development, cultural norms surrounding consumption and technology-based AI. Aesthetic dermatology is a field where patients' perception of their own body image and social visibility of results is more highly valued than in other areas of medicine. Therefore, any inaccurate information provided digitally will not only inform what patients think about their treatments, but also potentially impact how they value a procedure as well.

Another major implication of this literature review is that misinformation should be addressed within the clinical environment as opposed to being seen as an external issue. Research has shown repeatedly that when it comes to social media and dermatological/aesthetic services, patients frequently look for information via social media, evaluate multiple service providers online, and find inspiration for aesthetic procedures based upon appearance ideals found on-

line (Cassalia et al., 2023; Almudimeegh et al., 2024; Seetan et al., 2025). By the time a patient arrives at the clinic, much of the informational work has likely already occurred through other venues with unverified or commercial motivations. Therefore, the clinical visit now represents not only an opportunity for assessment and treatment planning; however, also a process of contextualizing the previously experienced digital exposures.

Another important implication relates to the difference between evidence-based communication and social media logic. Evidence-based counseling values complexity, individualization and acknowledging uncertainty. Social media, on the other hand, rewards simplicity and certainty, visually dramatic, short statements, and emotional response. As such, the mismatch between these two logics provides insight as to why quality physician generated content can obtain less attention than viral non-expert generated content. Additionally, it provides insight into why misinformation in aesthetic dermatology cannot simply be mitigated via fact checking. The issue is, in part, structural and reflects how algorithms prioritize the allocation of attention and how aesthetic related content is being consumed.

Further, generative AI expands upon this issue as it enables the industrialized generation of persuasive plausibility. Both Saeidnia et al. (2026) and Park et al. (2025) demonstrate that AI generated misinformation is difficult for users to identify and that the methods currently employed to mitigate misinformation are inconsistent. The potential implications of AI generated misinformation in aesthetics may be particularly significant given the ability of realistic language and synthetic images to directly influence a person's desire, fear or anxiety regarding aesthetic treatments. However, the review does not recommend that all use of AI be completely rejected. Rather, the review recommends the establishment of clear governance and transparency guidelines with respect to the use of AI in clinician communication and marketing. Sakunchotpanit et al. (2026), provide an example of how dermatology journals have recognized the need for transparency and governance regarding the use of AI and therefore the same principle should apply to clinician communication and marketing.

Additionally, the review highlights a challenge that exists within the specialty itself. On the one hand, the availability of dermatologists' evidence-based information through the Internet can increase accessibility to reliable information and decrease the impact of misinformation created by influencers (Wojtara et al., 2023; Karadag et al., 2024; Lammer et al., 2025). On the other hand, studies of dermatologist-created content reveal gaps in reference citation, ethical awareness, and image-use practices (Ünal et al., 2025). This suggests that improving the quality of online dermatology communication is not simply a matter of encouraging more content; it also requires better norms, training, and self-scrutiny within the profession.

In addition to the above mentioned limitations of the evidence-base, several other should also be recognized. In the first instance, most of the existing literature is cross-sectional. Thus, it is impossible for researchers to determine whether social media exposure causes an individual to have greater cosmetic interest, experience higher levels of body dissatisfaction, or exhibit lower levels of trust. Confounding variables (e.g., age, baseline concern with appearance, culture) can explain why associations exist between social media exposure and these measures. In the

second instance, there is no one single geography to represent all of the evidence. A large portion of the current literature comes from within very specific geographic regions. The third limitation relates to the rapid evolution of platform ecologies. Even within relatively short time-frames, studies can become somewhat outdated. Finally, to date, few direct empirical data regarding the effects of generative artificial intelligence specifically in dermatology exist. As a result, while many conclusions in the area of generative AI rely on generalizations from the larger health misinformation literature, they are also subject to this same set of limitations.

4.1. Practical Implications and Recommendations

The findings from this research study suggest a multi-faceted method. In terms of clinical application, a clinician must acknowledge when a patient is exposed to misinformation through their patient history. In aesthetic consultations, clinicians need to determine not only what a patient wants, but how they arrived at that want. Questions to consider include: "What type of sources did you reference when viewing information about a procedure?" "Did 'before-and-after' pictures have an impact on your expectations?" "Do you edit or filter pictures to help achieve your desired results?" "Have you received guidance from an AI chat tool regarding a specific procedure?" These types of questions are not merely for discussion purposes; they will help identify a potential distorted baseline, which can compromise both informed consent and patient satisfaction.

In addition to acknowledging patients who are being misled by misinformation, clinicians must create a safe environment to explain their own perspective rather than dismissively respond to a patient's concerns. A patient who is searching for answers online via social media, or generated by an artificial intelligence algorithm, may not be simply misinformed; they may be emotionally invested in either a positive or negative expectation based upon their self-image, or fear related to the procedure. Therefore, a direct refutation of the patient's misinformation may not be effective if the clinician fails to address the emotional investment the patient has made in the misinformation. Ouyang et al. (2022), found patient-centered methods for responding to misinformation in the context of dermatological clinics. While those patient centered methods were found to be useful in dermatology clinics, the authors believe those same methods can be applied to the aesthetic field. Clarify uncertainty. Explain the criteria for determining candidacy. Discuss the realistic time frame for attaining desired results. Distinguish marketing from evidence-based medicine. All of the above methods can aid in re-establishing decision making within clinically relevant parameters.

Finally, because many physicians now have patients they talk to and interact with outside of their clinics, based on the literature examined for this review, we found that dermatologists who connect with patients through social media, and other forms of online communication, can enhance the patient's information environment if the online communications are evidence-based, and open. However, that presence needs to be careful not to create the same kind of distortion it is trying to correct. Online posts need to clearly identify educational postings versus promotional postings, disclose all sponsorship or financial relationship(s) with companies, and not present images selectively. It also needs to not use photo editing, or AI generated visuals in a way that would cause potential viewers to misunderstand what likely outcome(s) could occur. As with all areas of medicine that are visual in nature, such as aesthetic dermatology, transparency is not "optional polish" it is a moral requirement.

Fourthly, as the above illustrates, misinformation aware digital literacy should be viewed as simply another form of informed consent. If patients learn to evaluate simple criteria for evaluating online content, such as: Who created this content? Are his/her credentials clear? Is the risk of harm and alternative treatments discussed clearly? Were references used? Were visual materials standardized or obviously curated? Was the recommendation tied to a product purchase or affiliate marketing? This level of literacy does not require patients to become experts in the area. It can assist patients in resisting high-confidence/low-context claims. Fifth, professional organizations and training institutions need to provide specific guidelines on how to communicate aesthetically online. Barrutia et al. (2022), point out that there are many legal and ethical concerns regarding the use of social media by dermatologists. Similarly, Sakunchotpanit et al. (2026), have documented how various policies regarding the use of generative AI have been poorly implemented in dermatological journals. In addition to providing clinicians with clear guidance on aesthetics for their own communications, similar clarity is also needed for education and public communications. A professional organization could recommend what is ethically acceptable in terms of presentation of outcomes, how to edit communications and when to disclose AI assistance; what constitutes a minimum standard for claims made regarding an individual's education, how to manage patient confidentiality, and the responsibility to correct misinformation when it has become widespread.

Digital platforms cannot remain neutral. Their design decisions determine whether something becomes visible, repeated, goes viral, or is targeted at a specific audience. Providing clearer labeling of sponsored content, obvious identification of AI-generated media, and enforcing stricter consequences against health-promotion deceptively presented on the web, can all contribute to limiting the damage caused by online misinformation. However, relying solely on reforms of digital platforms is unrealistic. The most viable strategy will be layered. Clinicians asking patients about misinformation, more specialized guidance, physicians taking greater responsibility for their communications online, increased public education, and evolving governance of AI in both publication and clinical communication.

5. Conclusion

The growing use of digital misinformation in aesthetic dermatology can be seen as one of many consequences of the current changes in the way people communicate about their health. Patients are getting much of their knowledge of procedures, products, providers, and beauty standards from social media before they consult with a provider. As a result, generative AI is increasing that process by allowing the creation and distribution of more engaging and persuasive digital communications that could include misstatements. Overall, the increase in digital communications is creating new problems related to how clinicians and patients interact. As indicated in the articles reviewed for this paper, misinformation in aesthetic dermatology appears to have consequences greater than simply incorrect or incomplete information. Misinformation in aesthetic dermatology can lead to unrealistic expectations, distorted perceptions of oneself, decreased informed consent, increased avoidable risks to the patient's safety, and a decreased ability to align evidence-based practices with digital narratives that are shaping patient beliefs.

Therefore, it is reasonable to understand that misinformation in aesthetic dermatology is both a communication issue, a clinical issue and a public health issue. A safe and timely response to the current situation requires more than correcting myths when they appear. It will require, at a minimum, misinformation aware counseling, professional transparency regarding online activity, improved patient digital literacy, and clear standards for communication using AI.

Future research should focus on understanding the different ways that each social media platform contributes to the risk of misinformation in aesthetic dermatology, the use of prospective study designs to determine causality, and an evaluation of synthetic imagery and AI-driven recommendations for aesthetic dermatology patients.

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