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RESEARCH

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Ethics in aesthetic practice: results from a survey of medical doctors attending aesthetic medicine programs in Italy

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Abstract

Background Within a rapidly evolving digital age in which social media plays a key role, the number of aesthetic medicine procedures performed globally is increasing.

Methods Physicians who participated in training courses in aesthetic medicine in Italy run by two different medical societies SIME (International School of Aesthetic Medicine Carlo Alberto Bartoletti Foundation) and Agorà (Post-Graduate School of Aesthetic Medicine Agorà), completed a survey (November 2023 – January 2024) to assess their viewpoints on ethics in aesthetic medicine and findings combined.

Results Of 452 physicians, 72.6% – 88.2% strongly agreed about the importance of maintaining up-to-date aesthetic medicine knowledge, protecting patient confidentiality, appropriate patient communication, prioritizing patient care and safety, respecting patient dignity and privacy, and obtaining informed consent. Around half of the respondents strongly agreed with correlations between social media (including the use of filters, idealized photos, and the constant sharing of content for personalized feedback) and psychological dysfunctions/body dissatisfaction, and that physicians should examine patients with highly filtered photographs for warning signs and unrealistic expectations. Approximately 15.4% – 55.0% strongly agreed with the importance of focusing on the patient's best interest, not performing procedures on those with unrealistic expectations, letting patients decide who to involve in consultations, education in key ethical principles in aesthetic medicine (including patient autonomy and self-determination), submitting experimental aesthetic procedures to a territorial ethics committee, and obtaining informed consent from adolescents for their procedures (as well as their parents/caregivers). 43.0% – 52.0% strongly disagreed that it was unnecessary to communicate all treatment information to patients, hear and respect patient opinions, or involve patients in decisions. One-third of respondents reported previously encountering ethical issues for treatment.

Conclusion In a survey of physicians focused on ethics in aesthetic medicine, most strongly agreed with key ethical principles in aesthetic medicine; however, more formal education/training was required to highlight the importance of patient autonomy and self-determination principles, involving patients in decisions, focusing on the patient's best interest, hearing/respecting patient opinion, avoiding procedures on those with unrealistic expectations, communicating all treatment aspects to patients, letting patients decide who to involve in consultations, and understanding the negative impact of social media on patients.

Keywords Aesthetic medicine, Ethics, Survey, Medical doctors

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Background

A survey conducted by the International Society of Aesthetic Plastic Surgery (ISAPS) demonstrated that the total number of aesthetic medicine procedures performed worldwide in 2023 compared with 2022 increased by 3.4%, with the total number of surgical procedures and non-surgical procedures rising by 5.5% and 1.7%, respectively [1]. Global estimates of the number of aesthetic medicine procedures performed in 2023 were approximately 15.8 million surgeries and 19.2 million non-surgical techniques or injections [1]. According to that survey, the top five aesthetic medicine-related surgical procedures globally were liposuction, breast augmentation, eyelid surgery, abdominoplasty, and rhinoplasty, and the top five non-surgical procedures were botulinum toxin or hyaluronic acid injections, hair removal, non-surgical skin tightening, and non-surgical fat reduction [1]. Botulinum toxin injections were the most common non-surgical procedure irrespective of gender, and the most common surgical procedure was liposuction in women and eyelid surgery in men [1].

Ethical issues in aesthetic medicine exist due to patient characteristics and external factors influencing patients. Broadly, ethical principles in medicine are based on 1) respect for patient autonomy, 2) Hippocratic concepts of beneficence and non-maleficence, 3) justice (equality), and 4) concern for scope of application [2–4]. Aesthetic medicine is first and foremost medicine, the essence of which, through listening and relating to patients, is to make a diagnosis, prevent and propose treatments. Its ultimate goal is to improve the quality of life, coming as close as possible to a complete state of physical, mental and social well-being of the subjects [2, 5]. From this, there is not a specific branch of ethics exclusively applied to aesthetic medicine, but rather a particular ethical reflection is needed due to certain peculiarities of aesthetic medicine. The increasing demand for aesthetic medicine procedures echoes an amplified focus in society on physical appearance within a quickly evolving digital age in which social media plays a key role in influencing consumers and their expectations [2, 3, 6, 7]. The use of air-brushed or "filtered" images, narrow beauty standards (especially maintaining a young appearance [2, 6]) and linking beauty with success and happiness are often propagated by social media and other forms of media [3]. However, there are ethical concerns regarding safety, professionalism, and equitable treatment access [3]. Aesthetic medicine providers can use social media to market their services [3, 8]. However, these platforms can also be used to spread misinformation or a lack of information (e.g., regarding treatment risks), leading to unrealistic expectations [3, 9, 10]. Additionally, artificial intelligence can perpetuate unrealistic and biased beauty standards [11, 12].

Consequently, the age of patients seeking cosmetic procedures is increasingly younger [2]. ISAPS found that in 2023, 53.7% of patients who underwent breast augmentation and 65.8% of patients who had rhinoplasty were 18- to 34-year-olds [1]. Studies have demonstrated that patients with body dysmorphia (a psychiatric disorder classified as an obsessive–compulsive disorder characterized by a fixation with a perceived or minor defect in appearance, unnoticeable to others) are often not recognized due to a lack of screening/guidelines on how to identify patients with this disorder; these patients are more likely to be disappointed with cosmetic post-procedural outcomes [2, 13, 14].

Ethical issues also exist due to aesthetic medicine practitioners, the location in which the treatment is being administered, and the treatment assessment tools used. Alongside the rise in the number of aesthetic procedures, there has been an increase in complications such as blindness and stroke from the administration of fillers [3, 15]. The degree of education of aesthetic medicine specialists varies widely worldwide [2]. Depending on the country and its regulations, aesthetic medicine can be performed by specialized physicians, general practitioners, non-medically trained technicians, plastic surgeons, dental practitioners, and pharmacists [2, 3, 16, 17]. This wide range of aesthetic medicine practitioners may impact patient risk [16, 17]. More non-invasive procedures have led to a rise in medical spas and retail clinics in some countries where practitioners often lack formal training in skin medicine, cosmetic surgery, clinical aspects of techniques, and patient engagement strategies for post-treatment follow-up [2]. Office-based surgery can also pose a greater risk to patients than in hospitals since regulations and inspections within hospitals for physician certification, equipment, surgical techniques, and emergency backup are more stringent than in an office setting [2]. Furthermore, aesthetic medicine outcomes are often assessed using aesthetic scales or a broad assessment of improvement despite the availability of instrumental techniques and validated patient-reported outcome tools [3, 16–20].

Due to a lack of surveys exploring ethical considerations made by medical doctors, specifically in aesthetic medicine, a survey of medical doctors participating in two aesthetic medicine training courses in Italy was conducted, and the results assessed.

Methods

Survey design

Between November 2023 and January 2024, medical doctors who participated in training courses in aesthetic medicine at two post-graduate educational centers in Italy run by two different medical societies completed a survey (Table 1) to assess their viewpoints on ethics in aesthetic medicine. The first medical society was the Società Italiana di Medicina Estetica (the Italian Society of Aesthetic Medicine; SIME), founded in 1975 [21], which established the Carlo Alberto Bartoletti Foundation (an international school of aesthetic medicine for post-graduate medical doctors in 1990, based in Rome (referred to as SIME in this article) [22]). The second medical society was Agorà, an Italian society of aesthetic medicine (founded in 1984) [23], which established a school of aesthetic medicine for post-graduate medical doctors (Scuola superiore post-universitaria di medicina ad indirizzo estetico; S.M.I.E.M. – Alberto Massirone) in 1986, based in Milan (referred to as Agorà in this article). The survey administered was in Italian and designed by the authors of this article based on their expertise in aesthetic medicine and ethics. For guidance on creating the survey and themes on ethics to be investigated, the authors also referred to similar published articles [24, 25] on surveys administered to medical students rather than medical doctors. Unlike our survey, these were not specific to aesthetic medicine, encompassing medicine in general. The list of questions was also designed so that it was not too long to avoid participant fatigue. In accordance with the Declaration of Helsinki, we obtained written informed consent from medical doctors to participate in this study. In compliance with the General Data Protection Regulation (EU 679/2016), participant anonymity was maintained throughout the study. The aim of the study was explained to participants before data collection. After entering sociodemographic information in the questionnaire, the respondents used a five-point Likert scale of (5) strongly agree, (4) agree, (3) neutral, (2) disagree, and (1) strongly disagree to evaluate survey statements on ethical principles in aesthetic medicine.

Survey assessment

Answers to questions were assessed qualitatively (frequency and percentage values given) and thematically. Themes of the survey were grouped into attitudes of medical doctors in aesthetic medicine towards core values (six questions), their duties (seven questions), and ethics (seven questions), as well as medical doctors' understanding of the effects of social media on aesthetic medicine (nine questions) and medical doctors' awareness of the importance of implementing procedures for the ethical practice of aesthetic medicine (seven questions; Table 1). The survey did not include a comparison group, and the collected sociodemographic data for respondents from SIME and Agorà were similar. Therefore, responses to survey questions focused on ethics in aesthetic medicine were combined and percentages of responders were reported in relation to the total number of doctors involved in this survey.

Results

Participant sociodemographic characteristics

The survey was administered to 103 medical doctors from SIME and 349 participants from Agorà. Most participants from SIME (87.4%) were between 35 and 74 years of age, whereas most respondents from Agorà (89.1%) were between < 30 and 50 years of age (Supplementary Table 1). Most participants were female (68.0% from SIME; 69.0% from Agorà). Most participants (96.1% from SIME and 87.0% from Agorà) had a medical specialty, most commonly family medicine/general practice (42.7% from SIME and 22.4% from Agorà).

Attitudes of medical doctors towards core values in aesthetic medicine

Responses to ethics-related questions in the survey for participants from SIME were combined with those from Agorà. Most respondents (approximately 80%) to the survey strongly agreed that "a physician should stay up-to-date and practice aesthetic medicine according to current medical knowledge by continually improving their skills and seeking help whenever necessary via refresher courses and training" (77.8%) and "a physician should protect patient confidentiality and adopt an appropriate manner of communication" (83.0%; Table 2). In addition, most respondents to the survey (approximately 70%) strongly agreed with the following statements: "do not criticize another doctor in the presence of patients or other healthcare personnel" (67.2%) and "physicians have professional and bioethical obligations to put patient safety above all else" (72.9%). Around half of the respondents strongly agreed with the following statements: "the motivations for performing a procedure should be in the patient's best interest, regardless of what the patient requests at the time of consultation" (52.5%) and "it is not advisable to perform cosmetic procedures on those who cannot make realistic assessments of their physical characteristics" (49.5%), with 34.2% and 36.4%, respectively, indicating that they agreed with these statements.

Attitudes of medical doctors towards their duties in aesthetic medicine

Most participants (72.6%) strongly agreed that patient care was their primary concern (Table 3). Less than half of the respondents (43.0%) strongly disagreed that "it is

Table 1 Survey information completed, and questions answered

Questions/Information collected			
Sociodemographic information collected			
1	Age[a]	**4**	Years of attendance
2	Sex	**5**	Medical specialty (yes/no)
3	Educational institution or university where training in aesthetic medicine is provided	**6**	Medical specialty (If you answered yes, please specify your medical specialty)
Statements investigating ethical principles in aesthetic medicine[b]			
7	A physician should stay up-to-date and practice aesthetic medicine according to current medical knowledge by continually improving their skills and seeking help whenever necessary via refresher courses and training	**25**	Social media induces dissatisfaction with physical appearance and can greatly impact the practice of cosmetic medicine
8	A physician should protect patient confidentiality and adopt an appropriate manner of communication	**26**	Social media platforms have filtering applications and filters that can allow users to modify their appearance, significantly changing the perception of beauty
9	Do not criticize another doctor in the presence of patients or other healthcare personnel	**27**	People can now spend much time idealizing their photographs to project an often unrealistic image of themselves
10	Patient care is your primary concern	**28**	Viewing images of idealized bodies from television or magazines can lead to body dissatisfaction
11	It is not necessary to communicate all information to patients about their treatment	**29**	The relentless cycle of sharing personal content and receiving feedback can exacerbate negative effects on body image and psychological health
12	The physician should respect the patient's dignity and privacy	**30**	People who have manipulated their photographs before sharing them on social media have reported greater body image dissatisfaction
13	Listening to and respecting the patient's opinions does not play an important role in a physician's duties	**31**	When presented with a highly filtered photograph, physicians should examine patients for warning signs and unrealistic expectations
14	In the decision-making process of patient management, it is not necessary to involve the patient	**32**	Physicians have professional and bioethical obligations to put patient safety above all else
15	Teaching medical ethics to medical students is an important aspect of medical education	**33**	The motivations for performing a procedure should be in the patient's best interest, regardless of what the patient requests at the time of consultation
16	Medical ethics education in a formal course is essential for good patient care	**34**	It is not advisable to perform cosmetic procedures on those who cannot make realistic assessments of their physical characteristics
17	I have a general interest in learning more about medical ethics	**35**	Written informed consent should always be obtained from the patient before any procedure
18	Medical ethics topics are relevant to me	**36**	Written consent is not always necessary, especially for minor cosmetic procedures
19	Medical ethics education can enable me to address current ethical issues	**37**	In the case of interventions on adolescents, it is necessary and sufficient to obtain informed consent from parents/guardians
20	Medical ethics education would not influence doctors' attitudes and behaviors or improve the doctor-patient relationship	**38**	Medical ethics training should include knowledge of general principles of bioethics, which can be applied to specific situations
21	I adapt the language of communication to improve the patient's understanding of the information provided	**39**	The patient's principle of autonomy and self-determination is the absolute principle of medical ethics
22	I let the patient decide which external professionals or family members they would like to be involved in the consultation	**40**	Every experimental aesthetic procedure should be submitted for evaluation to a territorial ethics committee
23	There are correlations between social media use and psychological dysfunctions, including depression and body image dissatisfaction	**41**	In your clinical experience, have you ever had to deal with ethical issues in choosing a treatment program for a patient?
24	The terms "Snapchat dysmorphia" and "selfie dysmorphia" have generated debate in both the public sphere and in medical literature	**42**	If you answered yes to Question 41, please explain further

Table 1 (continued)

The original survey was administered in Italian rather than English

[a] Respondents eligible to participate in the survey were aged between 25 and 75 years of age

[b] A five-point Likert scale of (5) strongly agree, (4) agree, (3) neutral, (2) disagree, and (1) strongly disagree was used by respondents to evaluate these statements. Questions 7 – 9 and 32 – 34 correspond to attitudes of medical doctors towards core values in aesthetic medicine. Questions 10 – 14 and 21 – 22 correspond to attitudes of medical doctors towards their duties in aesthetic medicine. Questions 15 – 20 and 38 correspond to attitudes of medical doctors towards ethics in aesthetic medicine. Questions 23 – 31 correspond to medical doctors' understanding of the effects of social media on aesthetic medicine. Questions 35 – 37 and 39 – 42 correspond to medical doctors' awareness of the importance of implementing procedures for the ethical practice of aesthetic medicine

Table 2 Attitudes of medical doctors towards core values in aesthetic medicine[a]

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
A physician should stay up-to-date and practice aesthetic medicine according to current medical knowledge by continually improving their skills and seeking help whenever necessary via refresher courses and training	1 (0.2)	0 (0.0)	5 (1.1)	91 (20.6)	344 (77.8)
A physician should protect patient confidentiality and adopt an appropriate manner of communication	1 (0.2)	0 (0.0)	5 (1.1)	69 (15.6)	367 (83.0)
Do not criticize another doctor in the presence of patients or other healthcare personnel	1 (0.2)	0 (0.0)	24 (5.4)	120 (27.1)	297 (67.2)
Physicians have professional and bioethical obligations to put patient safety above all else	1 (0.2)	5 (1.1)	5 (1.1)	109 (24.7)	322 (72.9)
The motivations for performing a procedure should be in the patient's best interest, regardless of what the patient requests at the time of consultation	0 (0.0)	17 (3.8)	41 (9.3)	151 (34.2)	232 (52.5)
It is not advisable to perform cosmetic procedures on those who cannot make realistic assessments of their physical characteristics	2 (0.5)	8 (1.8)	52 (11.8)	161 (36.4)	219 (49.5)

[a] Statements shown in the table correspond to questions 7 – 9 and 32 – 34 in the survey. Responses from participants at SIME and Agorà have been grouped in this analysis ($N = 442$)

Table 3 Attitudes of medical doctors towards their duties in aesthetic medicine[a]

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Patient care is your primary concern	1 (0.2)	0 (0.0)	1 (0.2)	119 (26.9)	321 (72.6)
It is not necessary to communicate all information to patients about their treatment	190 (43.0)	139 (31.4)	40 (9.0)	61 (13.8)	12 (2.7)
The physician should respect the patient's dignity and privacy	1 (0.2)	0 (0.0)	0 (0.0)	93 (21.0)	348 (78.7)
Listening to and respecting the patient's opinions does not play an important role in a physician's duties	227 (51.4)	133 (30.1)	23 (5.2)	44 (10.0)	15 (3.4)
In the decision-making process of patient management, it is not necessary to involve the patient	230 (52.0)	140 (31.7)	40 (9.0)	16 (3.6)	15 (3.4)
I adapt the language of communication to improve the patient's understanding of the information provided	1 (0.2)	0 (0.0)	13 (2.9)	139 (31.4)	289 (65.4)
I let the patient decide which external professionals or family members they would like to be involved in the consultation	7 (1.6)	73 (16.5)	110 (24.9)	184 (41.6)	68 (15.4)

[a] Statements shown in the table correspond to questions 10 – 14 and 21 – 22 in the survey. Responses from participants at SIME and Agorà have been grouped in this analysis ($N = 442$)

not necessary to communicate all information to patients about their treatment", with 31.4% disagreeing; however, 13.8% agreed with this statement. Most respondents (78.7%) strongly agreed that "the physician should respect the patient's dignity and privacy." Approximately half of the participants strongly disagreed that "listening to and respecting the patient's opinions does not play an important role in a physician's duties", and almost a third of respondents (30.1%) disagreed. Around half of the respondents (51.4%) strongly disagreed (and nearly a third of participants [30.1%] disagreed) that "in the decision-making process of patient management, it is not necessary to involve the patient." Almost two-thirds of participants strongly agreed (and 31.4% of respondents agreed) that they "adapt the language of communication to improve the patient's understanding of the information provided."

Table 4 Attitudes of medical doctors towards ethics in aesthetic medicine[a]

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Teaching medical ethics to medical students is an important aspect of medical education	6 (1.4)	5 (1.1)	26 (5.9)	150 (33.9)	255 (57.7)
Medical ethics education in a formal course is essential for good patient care	6 (1.4)	0 (0.0)	37 (8.4)	156 (35.3)	243 (55.0)
I have a general interest in learning more about medical ethics	8 (1.8)	7 (1.6)	107 (24.2)	180 (40.7)	139 (31.4)
Medical ethics topics are relevant to me	6 (1.4)	6 (1.4)	83 (18.8)	189 (42.8)	158 (35.7)
Medical ethics education can enable me to address current ethical issues	6 (1.4)	8 (1.8)	82 (18.6)	188 (42.5)	158 (35.7)
Medical ethics education would not influence doctors' attitudes and behaviors or improve the doctor-patient relationship	166 (37.6)	209 (47.3)	37 (8.4)	18 (4.1)	11 (2.5)
Medical ethics training should include knowledge of general principles of bioethics, which can be applied to specific situations	0 (0.0)	7 (1.6)	36 (8.1)	228 (51.6)	170 (38.5)

[a] Statements shown in the table correspond to questions 15 − 20 and 38 in the survey. Responses from participants at SIME and Agorà have been grouped in this analysis ($N = 442$)

Responses to "I let the patient decide which external professionals or family members they would like to be involved in the consultation" were more variable, with 42.6% agreeing with this statement, 24.9% unsure whether they agreed or disagreed with it, 16.5% disagreeing with it, and 15.4% strongly agreeing with it.

Attitudes of medical doctors towards ethics in aesthetic medicine

More than half of the medical doctors who completed the survey strongly agreed (and around a third of them agreed) that "teaching medical ethics to medical students is an important aspect of medical education" (Table 4). Similarly, more than half of the respondents strongly agreed that "medical ethics education in a formal course is essential for good patient care," and 35.3% of participants agreed. More participants agreed (40.7%) than strongly agreed (31.4%) that they "have a general interest in learning more about medical ethics," but around a quarter of respondents selected "neutral" for this topic. Most participants strongly agreed (35.7%) or agreed (42.8%) with the following statement: "Medical ethics topics are relevant to me," but 18.8% were unsure if they agreed or disagreed with this. Similarly, most respondents strongly agreed (35.7%) or agreed (42.5%) with the following statement: "Medical ethics education can enable me to address current ethical issues," but 18.6% were unsure if they agreed or disagreed with this. Conversely, most participants strongly disagreed (37.6%) or disagreed (47.3%) that "medical ethics education would not influence doctors' attitudes and behaviors or improve the doctor-patient relationship." Specifically, most respondents strongly agreed (38.5%) or agreed (51.6%) that "medical ethics training should include knowledge of general principles of bioethics, which can be applied to specific situations."

Understanding of the effects of social media on aesthetic medicine

Almost half of the respondents strongly agreed (and 43.7% of them agreed) that "there are correlations between social media use and psychological dysfunctions, including depression and body image dissatisfaction" (Table 5). A similar proportion of participants strongly agreed (35.1%) and agreed (43.2%) that "the terms "Snapchat dysmorphia" and "selfie dysmorphia" have generated debate in both the public sphere and in medical literature." Around half of the respondents agreed that "social media induces dissatisfaction with physical appearance and can greatly impact the practice of cosmetic medicine," and 43.4% of participants strongly agreed with this observation. Around half of the participants strongly agreed (and 37% − 42% of them agreed) with observations that "social media platforms have filtering applications and filters that can allow users to modify their appearance, significantly changing the perception of beauty" and "viewing images of idealized bodies from television or magazines can lead to body dissatisfaction." Similarly, 45% − 48% of participants strongly agreed (and 41% of them agreed) with observations that "people can now spend much time idealizing their photographs to project an often-unrealistic image of themselves" and "the relentless cycle of sharing personal content and receiving feedback can exacerbate negative effects on body image and psychological health." Although 21.5% of participants did not agree or disagree with the observation that "people who have manipulated their photographs before sharing them on social media have reported greater body image dissatisfaction," 45.7% agreed, and 32.4% strongly agreed with this remark. Approximately half of the respondents strongly agreed (and the other half agreed) that "when presented with a highly filtered

Table 5 Medical doctors' understanding of the effects of social media on aesthetic medicine[a]

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
There are correlations between social media use and psychological dysfunctions, including depression and body image dissatisfaction	7 (1.6)	4 (0.9)	27 (6.1)	193 (43.7)	211 (47.7)
The terms "Snapchat dysmorphia" and "selfie dysmorphia" have generated debate in both the public sphere and in medical literature	7 (1.6)	3 (0.7)	86 (19.5)	191 (43.2)	155 (35.1)
Social media induces dissatisfaction with physical appearance and can greatly impact the practice of cosmetic medicine	2 (0.5)	0 (0.0)	28 (6.3)	220 (49.8)	192 (43.4)
Social media platforms have filtering applications and filters that can allow users to modify their appearance, significantly changing the perception of beauty	3 (0.7)	11 (2.5)	39 (8.8)	164 (37.1)	224 (50.7)
People can now spend much time idealizing their photographs to project an often unrealistic image of themselves	10 (2.3)	18 (4.1)	35 (7.9)	181 (41.0)	198 (44.8)
Viewing images of idealized bodies from television or magazines can lead to body dissatisfaction	1 (0.2)	1 (0.2)	18 (4.1)	184 (41.6)	238 (53.8)
The relentless cycle of sharing personal content and receiving feedback can exacerbate negative effects on body image and psychological health	0 (0.0)	1 (0.2)	46 (10.4)	183 (41.4)	211 (47.7)
People who have manipulated their photographs before sharing them on social media have reported greater body image dissatisfaction	2 (0.5)	0 (0.0)	95 (21.5)	202 (45.7)	143 (32.4)
When presented with a highly filtered photograph, physicians should examine patients for warning signs and unrealistic expectations	6 (1.4)	1 (0.2)	17 (3.8)	212 (48.0)	206 (46.6)

[a] Statements shown in the table correspond to questions 23 – 31 in the survey. Responses from participants at SIME and Agorà have been grouped in this analysis ($N = 442$)

Table 6 Understanding the importance of practicing aesthetic medicine ethically[a] and response to Question 41[b]

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The patient's principle of autonomy and self-determination is the absolute principle of medical ethics	27 (6.1)	50 (11.3)	110 (24.9)	175 (39.6)	81 (18.3)
Every experimental aesthetic procedure should be submitted for evaluation to a territorial ethics committee	8 (1.8)	23 (5.2)	82 (18.6)	151 (34.2)	178 (40.3)
Written informed consent should always be obtained from the patient before any procedure	2 (0.5)	0 (0.0)	4 (0.9)	46 (10.4)	390 (88.2)
Written consent is not always necessary, especially for minor cosmetic procedures	348 (78.7)	63 (14.3)	14 (3.2)	9 (2.0)	7 (1.6)
In the case of interventions on adolescents or children, it is necessary and sufficient to obtain informed consent from parents/guardians	55 (12.4)	86 (19.5)	45 (10.2)	135 (30.5)	121 (27.4)
	Yes		**No**		
In your clinical experience, have you ever had to deal with ethical issues in choosing a treatment program for a patient?	154 (35.8)		276 (64.2)		

[a] Statements correspond to questions 35 – 37 and 39 – 40 in the survey; ten respondents from SIME skipped these survey questions. Responses from participants at SIME and Agorà have been grouped in this analysis ($N = 442$)

[b] Statements correspond to question 41 in the survey. Responses from participants at SIME and Agorà have been grouped in this analysis ($N = 430$)

photograph, physicians should examine patients for warning signs and unrealistic expectations".

Understanding the importance of practicing aesthetic medicine ethically

Around one-fifth of respondents strongly agreed, and two-fifths of participants agreed that "the patient's principle of autonomy and self-determination is the absolute principle of medical ethics;" however, around a quarter of respondents selected "neutral" for this statement (Table 6). Approximately two-fifths of participants strongly agreed, and about a third agreed, that "every experimental aesthetic procedure should be submitted for evaluation to a territorial ethics committee"; however, 18.6% neither agreed nor disagreed with this statement. As expected, most respondents (88.2%) to the survey strongly agreed that "written informed consent should always be obtained from the patient before any procedure", and most (78.7%) strongly disagreed with the opposite statement that "written consent is not always necessary, especially for minor cosmetic procedures," with 14.3% disagreeing with the latter

suggestion. Responses to "in the case of interventions on adolescents or children, it is necessary and sufficient to obtain informed consent from parents/guardians" were more variable, with less than a third of participants strongly agreeing with this statement, more than a quarter of respondents agreeing with it, 19.5% disagreeing with it, and 12.4% strongly disagreeing with it.

Clinical experience of surveyed participants with ethical issues in choosing treatment programs for patients

Approximately two-thirds of participants indicated that (at the time of completing the survey) they did not ever have to deal with ethical issues when choosing a treatment program for a patient (Table 6). Physicians indicated that they dealt with ethical issues when choosing whether to treat patients who were adolescents or children (5 physicians); had unrealistic expectations or body dysmorphia (4 physicians); had an autoimmune disease, serious allergies, cancer and were undergoing chemotherapy, or clinical conditions requiring surgery (4 physicians); who wanted to increase lip or facial volume (3 physicians); requested more treatment than needed (2 physicians); were previously treated with products that are not well known or which had been purchased by them (1 physician); had a euthanasia request (1 physician); were from the transgender community (1 physician); were anorexic and requested weight loss treatment (1 physician).

Details regarding ethical issues were not provided for respondents from Agorà, but 7 participants indicated that they faced ethical issues in considering aesthetic medicine treatment for a patient if the patient had serious diseases, and 7 participants indicated that they faced this challenge when patients were obsessed with their appearance.

Discussion

In a survey of 452 medical doctors who attended two different training courses in aesthetic medicine in Italy to evaluate their perspectives on ethics in aesthetic medicine, most physicians strongly agreed that they should maintain up-to-date knowledge of the field, protect patient confidentiality, use an appropriate manner of patient communication, patient care is their primary concern, patient dignity and privacy should be respected, and informed consent should be obtained pre-procedures. Most physicians also strongly agreed that patient safety should be prioritized above all else. Around two-thirds of respondents strongly agreed that they should not criticize other doctors in the presence of patients/other healthcare professionals, and communication should be adapted to relay information to patients appropriately. However, more than half of them strongly agreed that teaching medical ethics to medical students is important and that teaching this in a formal course was essential for good patient care. Only around half of the respondents strongly disagreed that involving the patient in the treatment decision-making process is unnecessary and that (listening to) and respecting patient opinion does not play a key role in their duties. Around half of the respondents strongly agreed that the patient's best interest should be the primary motivation for carrying out a procedure and that it is best not to perform procedures on those with unrealistic assessments of their appearance. Two-fifths of participants strongly agreed that every experimental aesthetic procedure should be submitted for evaluation to a territorial ethics committee and that medical ethics training should include general bioethics principles that could be applied to specific cases. However, less than half of the respondents strongly disagreed that it is not essential to communicate all information to patients regarding their treatment. Fewer than 40% of participants strongly disagreed that medical ethics education would not influence their attitudes and behaviors or improve their relationship with patients. Around a third of participants strongly agreed that medical ethics topics were relevant to them, that medical ethics education could enable them to address ethical issues, and that they were interested in learning more about medical ethics. Fewer than a third of participants strongly agreed that obtaining informed consent from parents/guardians for procedures on adolescents or children was necessary and sufficient. Around one-fifth of respondents strongly agreed that autonomy and self-determination are absolute principles of medical ethics.

Survey findings revealed that around half of the respondents understood the negative impact of social media on patients by strongly agreeing with its correlation with psychological dysfunctions (such as depression and body image dissatisfaction), the fact that filters used on social media platforms can significantly change the perception of beauty and idealized body images can lead to body dissatisfaction, and the negative impact on the psychological health of constantly sharing content for personalized feedback. Around half of the participants also strongly agreed that physicians should examine patients for warning signs and unrealistic expectations when presented with a highly filtered photograph. Fewer than half of the patients strongly agreed that much time is spent idealizing photographs (often projecting an unrealistic image) and that social media leads to appearance dissatisfaction (greatly impacting cosmetic medicine). Around a third of participants strongly agreed that people with manipulated photos are more likely to have body image dissatisfaction.

Two-thirds of participants indicated they had not encountered ethical issues when choosing patient treatment programs. Ethical issues faced by 3 – 5 physicians included deciding whether to treat those who were adolescents/children, with unrealistic expectations or body dysmorphia, with diseases or disorders (an autoimmune disease, serious allergies, cancer and undergoing chemotherapy) or clinical conditions requiring surgery, and those who wanted to increase lip/facial volume.

There is a lack of surveys examining the ethical aspects of aesthetic medicine. In a survey based in the UK exploring the perspectives of 82 participants with a range of roles in the healthcare industry on regulatory standards and ethical challenges for non-surgical aesthetic facial procedures, most respondents (99%) agreed that there should be a minimum educational standard for registered healthcare professionals administering injectables in aesthetic medicine [26]. Only 30% of participants in that study agreed that healthcare practitioners should oversee and prescribe for non-healthcare practitioners in aesthetic medicine [26]. Most respondents (88%) to that survey agreed that specialist training in injectables used in aesthetic medicine should involve a faculty of trainers with different areas of expertise [26], and 96% agreed that injectables in aesthetic medicine should be taught by those with high-level certified expertise [26]. Regarding social media, 90% of participants in that survey considered it acceptable to use social media to advertise their services [26]. In another survey administered to fellowship directors and facial plastic surgery fellows of the American Academy of Facial Plastic and Reconstructive Surgery to assess their opinion on 15 actual clinical cases associated with potentially ethical issues in rhinoplasty, responses by fellowship directors and less experienced fellows were significantly different for a third of the clinical cases [4]. In one of the cases involving a woman with average nose dimensions and an unhealthy fixation with the appearance of her nose, requesting changes to her nose that would lead to an unnatural, operated-on appearance, there was no significant difference in multiple-choice responses by fellowship directors and fellows in the survey [4]. Most respondents to this case agreed that the plastic surgeon should politely refuse to perform the rhinoplasty as the surgery outcomes would not satisfy this patient, or the practitioner should advise against surgery and candidly discuss their concerns regarding her stated aesthetic goals [4].

Our study is limited because it only involved medical doctors at two training centers in Italy rather than other geographical locations or other aesthetic medicine practitioners who are healthcare professionals but not medical doctors or non-medically trained practitioners, and the fact that the survey was administered over a short period meaning that changes over time in responses cannot be assessed. Furthermore, our study did not allow us to determine whether responses by different medical specialties (*e.g.*, plastic surgeons versus general practitioners) would be different.

However, overall, our results highlight that although most medical doctors agree with key ethical principles in aesthetic medicine, more formal education and training in ethics are required to highlight the importance of principles of bioethics (including patient autonomy and self-determination), involving the patients in the decision-making process, focusing on the patient's best interest while listening and respecting their opinion, not performing procedures on those with unrealistic expectations, communicating all aspects of treatment to patients, letting patients decide which external professionals or family members to involve in the consultation, obtaining assent from adolescent or children for procedures on them in addition to the consent of the legally authorized representative, submitting experimental aesthetic procedures to a research ethics committee, and understanding the negative impact of social media on patients. This involves the practitioner learning how to use the tools of bioethics to provide answers by empathically deepening an intimate understanding of patients and their psyche. The four fundamental ethical principles in medicine can help as a starting point to recognise the reasons of patients' requests and propose them the best options, without enacting unjustified interventions [2, 5].

Multidisciplinary discussions in aesthetic medicine are required to define shared ethical limits, including focusing on safety and improving patient quality of life and well-being while maintaining aesthetic harmony so patients look better but still like themselves [2]. Understanding the patient's personality and traits of body dysmorphia or obsessive–compulsive disorder is very important [2]. It is also recommended that patients be screened for body dysmorphia by following DSM- 5 criteria to determine traits of body dysmorphia, including impairment of social interactions or daily normal functioning [13, 27]. Some characteristics of patients with body dysmorphia include multiple unsuccessful aesthetic medicine consultations, specific motivations for treatment such as improving social life, a fixation on a particular feature, presenting a detailed list of flaws, using excessive camouflage techniques for a perceived defect, repetitive behaviors such as constantly looking in the mirror, high expectations, and using altered images for a treatment goal [13].

Additionally, standardized guidelines are needed to train practitioners of aesthetic medicine [3] and should include the importance of attaining informed consent and shared decision-making between the patient and the doctor [2, 3], setting realistic expectations [2],

tailoring language depending on the health literacy of the patient [3, 28, 29], the inclusion of layperson language [3], allowing sufficient time for patients to raise concerns [3], moving away from narrow definitions of beauty [3], and using social media responsibly with regards to service promotion and the disclosure of conflicts of interest [3]. It is also essential to carefully take the patient's medical history as comorbidities and allergies may make aesthetic procedures more risky, suboptimal, or unviable [2]. Besides taking a medical history, conducting a mental health status examination to clarify motivations for and expectations after treatment is important, as well as communicating treatment limitations during consultations [13]. Ongoing training and professional exchange with colleagues in a global context are also recommended to improve techniques and the ethical practice of aesthetic medicine [2].

Conclusions

The survey provided an overview of ethics in the sector and its perception, to identify the main current challenges and offer an initial starting point for reaching a future consensus between professionals and medical societies. In a survey of 452 medical doctors at two different training centers of aesthetic medicine in Italy, most medical doctors agreed with key ethical principles in aesthetic medicine. The 91.6% of doctors involved agreed (or strongly agreed) on the importance of teaching medical ethics to medical students, thus showing particular attention to the topic. However, more formal education and training were required to highlight the importance of principles of bioethics, patient autonomy, and self-determination; only the 35.8% of the doctors, in fact, declared to ever have dealt with ethical issues in choosing a treatment program for a patient in their clinical experience, proving the strong need for raising awareness on the issue. Key ethical principles that most doctors agreed on included: sharing the decision-making process with patient; focusing on the patient's best interest while listening and respecting their opinion; not performing procedures on those with unrealistic expectations (such as those with body dysmorphia); communicating all aspects of treatment to patients; letting patients decide who to involve in consultations; obtaining assent from adolescents/children for procedures on them in addition to the consent of the legally authorized representative; and understanding the negative impact of social media on patients.

Abbreviations

SIME Società Italiana di Medicina Estetica (the Italian Society of Aesthetic Medicine)
SMIEM Scuola superiore post-universitaria di medicina ad indirizzo estetico (school of aesthetic medicine for post-graduates)

Supplementary Information

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Supplementary Material 1

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Authors' contributions

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Data availability

No datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate

Medical doctors provided their informed consent before study participation, according to the current revision of Declaration of Helsinki.

Consent for publication

Medical doctors who participated in the study provided their consent for publication, and data were anonymized and grouped.

Competing interests

The authors declare no competing interests.

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