

Plastic Surgery or Facial Plastic Surgery: Can the Public Tell the Difference?

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Background: Social media and online advertising are increasingly used by plastic surgeons (PSs) to educate patients and obtain referrals, but it remains unclear whether the general public can distinguish the difference in training and accreditation among medical professionals advertising online. Our study elucidates the public's expectations regarding the distinction between plastic surgery and facial plastic surgery.

Methods: A survey was distributed via MTurk, an Amazon surveying service, to collect information about demographics and assumptions that would be made solely based on the terminology "facial PS" (FPS) and "PS." Participants were restricted to those residing in the United States.

Results: A total of 253 responses were collected. Based on the term FPS, respondents on average moderately to strongly agreed that they would expect an FPS to have completed a plastic and reconstructive surgery residency program (mean = 1.81; scale from 1= strongly agree to 5= strongly disagree) and would feel moderately to strongly misled if they visited an FPS for a consultation and later learned that the provider did not complete a plastic and reconstructive surgery residency (mean = 3.62; scale from 1 = not misled at all to 5 = extremely misled).

Conclusions: Despite increasing advocacy by professional societies and the member societies of the American Board of Medical Specialties, this study demonstrated that the lay public is unaware of factually different training and certification pathways given similarity in nomenclature. This study was notably not designed to draw conclusions or imply superiority of one specialty, certifying board, or training model over the other. (*Plast Reconstr Surg Glob Open* 2024; 12:e5679; doi: 10.1097/GOX.0000000000005679; Published online 4 March 2024.)

INTRODUCTION

The influence of social media and online advertising continues to increase within the healthcare industry.¹⁻³ In 2013, a survey of the American Society of Plastic Surgeons (ASPS) members found that over half of respondents utilized social media for educational or professional purposes.⁴ In 2019, a cross-sectional study showed that up to 48.5% of potential plastic surgery patients are influenced by social media when considering cosmetic procedures and that 51.4% of these individuals follow plastic surgeons (PSs) on social media.⁵

In effect, social media and the internet have proven to be powerful tools that have changed the way that plastic surgery as a specialty is perceived and viewed by the public.

This virtual marketing platform also serves as a method for practitioners to obtain referrals, as patients increasingly utilize social media to identify and research providers.⁶⁻¹¹ As a result, an increasing number of medical providers in the field of aesthetic surgery are turning to social media and utilizing various terminology to describe their field of practice online [eg, "facial PS (FPS)," "cosmetic surgeon," "PS," "aesthetic surgeon," etc]. As the presence of plastic surgery-related content on social media continues to increase, the amount of unregulated content continues to increase as well. In fact, Dorfman et al¹² found that PSs are commonly underrepresented among physicians and general users posting plastic surgery content on Instagram.

With the increasing presence of medical providers promoting their practices and qualifications online, it is unclear whether the public can distinguish the difference in medical training amongst these professionals

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despite the significant contrariety in their certification and educational background. For example, although an FPS typically completes a 5-year otolaryngology residency training followed by 1 year of fellowship training in facial plastic surgery, most PSs complete a 6-year plastic and reconstructive surgery residency training, with or without additional fellowship training, and are licensed by the American Board of Plastic Surgery (ABPS). Furthermore, PSs are licensed by the ABPS, which is a member of the American Board of Medical Specialties, whereas FPSs are licensed by the relatively new American Board of Facial Plastic and Reconstructive Surgery. It is unclear if the general public perceives this difference in training and whether or not knowledge of these differences would affect their choice of provider or their perception of patient care.

The goal of this study is to delineate the general public's understanding of the distinction between the fields of plastic surgery and facial plastic surgery. We further investigate whether there is an effect on the perceived "brand" image of either specialty when a potential patient is informed regarding the difference in training required by these two specialties.

METHODS

An online, 26-question survey was designed using Google Survey (Google LLC, Mountain View, Calif.) to collect information about respondent demographics, prior experiences with plastic surgery, and assumptions that would be made solely based on the terminology "FPS" as compared with "PS." Survey response options included multiple choice, free text, and Likert scales. The survey was developed by interdisciplinary focus groups including medical students, current residents, and faculty. The survey was distributed in October of 2022 on Mechanical Turk (MTurk), an Amazon crowdsourcing-based service. Crowdsourcing is a novel method of surveying populations by obtaining ideas, opinions, or services from a large, diverse group of internet users, often described as "outsourcing the work to the crowd."¹³ In the field of plastic surgery, this method has been previously utilized in a study to aid aesthetic PSs in tailoring their marketing strategies and in another study to assess the public perception of aesthetic outcomes of unilateral cleft lip repair techniques.^{14,15}

MTurk is an internet crowdsourcing service through which eligible participants (or "users") receive compensation for completing human intelligence tasks (HITs), such as completing surveys, per the researcher's prespecified eligibility criteria. Workers are only compensated once the researcher approves their submitted responses. This method of survey distribution was chosen for our study as it allows for elicitation of ideas, choices, and opinions from a diverse group of individuals in an efficient and cost-effective fashion.¹⁴

To access and complete our survey, users had to meet the following criteria: current residence in the United States, proficient English literacy, a HIT approval rate of at least 95%, and at least 5000 total previous HIT approvals.

Takeaways

Question: Does the public know the difference between plastic surgeons and facial plastic surgeons?

Findings: No, the public does not understand the difference in training between facial plastic surgeons and plastic surgeons.

Meaning: Despite increasing advocacy by the American Board of Plastic Surgery and other governing bodies, the average patient does not understand the difference in training background between otolaryngology trained facial plastic surgeons and plastic surgeons.

A high threshold for prior HIT approvals was chosen to help facilitate high-quality survey responses. All questions were mandatory, and the compensation per survey for MTurk workers was set at \$0.50. The survey was closed automatically when enough participants were recruited for survey completion. Data were stored and analyzed using excel spreadsheets. Free-text responses regarding patient experience in healthcare and expectations regarding accreditation and training experience for PS and FPS were categorized into representative codes by a single researcher for data analysis.

To ensure that participants were paying adequate attention to each question, assess for adequate English literacy, and ensure the validity of the gathered data, the following questions were included in the survey:

1. What is your favorite meal of the day and why?
2. Please describe your favorite childhood memory.

Both questions were instructed to be answered in full sentences in a free-text box to assess the participants' English proficiency and to make sure participants were paying adequate attention to survey questions. Respondents who did not provide at least one full sentence or provided an incoherent answer (eg, did not name a food or meal for the first question) were excluded from the study. Those excluded were prevented from taking the survey a second time.

Ordinal data were collected through Likert-scale responses and used to calculate mean scores for each survey question.

RESULTS

Respondent Demographics

A total of 253 responses were received from MTurk workers who met inclusion criteria. Of the respondents, 105 identified as women (41.5%), and 148 identified as men (58.5%, [Table 1](#)). The majority of respondents reported their age to be between 31 and 40 years old ($n = 112$, 44.3%), followed by 21 and 30 years old ($n = 54$, 21.3%), and 41 and 50 years old ($n = 50$, 19.8%). In regard to their highest level of education, the majority of respondents had a bachelor's degree ($n = 131$, 51.8%), master's degree ($n = 39$, 15.4%), or completed high school ($n = 70$, 27.7%). A few respondents reported having earned an

Table 1. Respondent Demographics

Demographic	No.	Percentage
Identifying sex		
Male	148	58.5
Female	105	41.5
Age, y		
21–30	54	21.3
31–40	112	44.3
41–50	50	19.8
51–60	21	8.3
61–70	14	5.5
70+	2	0.8
Highest level of education		
Some high school	6	2.4
Completion of high school	70	27.7
Bachelor’s degree	131	51.8
Master’s degree	39	15.4
Other	7	2.7
Annual income (USD)		
Unemployed	2	0.8
\$1–\$9999	23	9.1
\$10,000–\$24,999	47	18.6
\$25,000–\$49,999	80	31.6
\$50,000–\$74,999	55	21.7
\$75,000–\$99,999	20	7.9
\$100,000 or more	26	10.3
Prior experience in healthcare		
Yes	18	7.1
No	235	92.9
Prior consideration of undergoing plastic surgery		
Yes	93	36.8
No	160	63.2

associate’s degree (n = 3, 1.2%), earned a doctorate degree (n = 2, 0.8%), completed trade school (n = 2, 0.8%), or completed part of high school (n = 6, 2.4%). In response to self-reported annual income, most respondents earned between \$25,000 and \$49,999 (n = 80, 31.6%), followed by \$50,000 and \$74,999 (n = 55, 21.7%), \$10,000 and \$24,999 (n = 47, 18.6%), \$1 and \$9999 (n = 23, 9.1%), \$75,000 and \$99,000 (n = 20, 7.9%), \$100,000 and \$149,999 (n = 16, 6.3%), \$150,000 or higher (n = 10, 4.0%), or were unemployed (n = 2, 0.8%).

Healthcare and Plastic Surgery Experience

A total of 235 respondents reported having no prior experience in healthcare, whereas 18 reported experience working in healthcare as a certified nursing assistant (n = 3), registered nurse (n = 9), healthcare data analyst (n = 1), physical therapist (n = 1), medical assistant (n = 1), or dental technician (n = 1). The results show that 36.8% of respondents (n = 93) reported that they have previously strongly considered undergoing a plastic surgery procedure, whereas 63.2% of respondents (n = 160) did not. Furthermore, 94.1% of respondents (n = 238) reported that they have not previously undergone a plastic surgery procedure, whereas 5.9% of respondents (n = 15) reported that they have. Finally, 66.8% of respondents (n = 169) denied having any close friends or family who have undergone a plastic surgery

procedure, whereas 33.2% of respondents (n = 84) reported that they do.

Survey Responses

Respondents reported that they are neutral toward or moderately agree with the statement that “FPS” and “PS” are synonymous and interchangeable terms (mean = 2.52; range from 1= strongly agree to 5 = strongly disagree). Based on the terminology “FPS” and “PS,” most respondents reported that they are neutral toward or moderately agree that they expect that an FPS and a PS undergo the same length and type of medical training in terms of medical school, residency, and fellowship. Most respondents reported that they would expect an FPS and PS to have undergone the “same amount” of plastic surgery training (n = 158, 62.45%), followed by an FPS having undergone a “greater amount” of training (n = 69, 23.27%), and finally, by an FPS having undergone a “lesser amount” of training in comparison to a PS (n = 26, 10.28%) (Fig. 1).

Of the respondents who provided specific free-response answers (n = 145, 57.3% of total respondents) when asked what type of medical training they would expect an FPS to have undergone, 80.7% reported a plastic surgery residency (n = 117), 14.5% reported an ear, nose and throat residency (n = 21), and 4.8% reported both a plastic surgery and ear, nose, and throat residency (n = 7) (Fig. 2). Respondents strongly to moderately agreed that they would expect an FPS would have completed a plastic surgery residency training program after medical school (mean = 1.82; scale from 1 = strongly agree to 5 = strongly disagree), and moderately to strongly agreed that they would expect an FPS to be accredited by the American Board of Plastic Surgeons (mean = 4.12; scale from 1 = strongly disagree to 5 = strongly agree).

If the respondent visited an FPS and was told that the provider was formally trained in otolaryngology rather than in plastic surgery, the majority reported that they would feel moderately to strongly misled (mean = 3.63; scale from 1 = not misled at all to 5 = extremely misled; Fig. 3). Furthermore, respondents reported that knowing

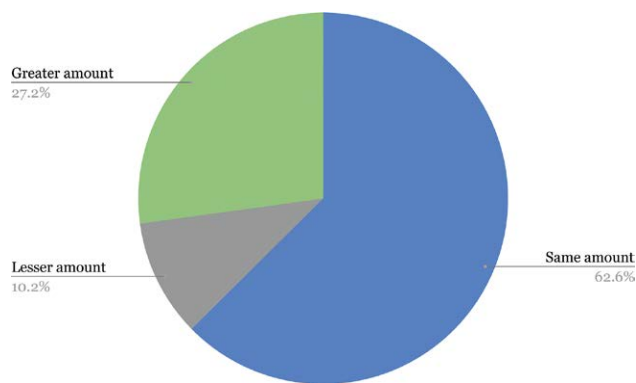


Fig. 1. Responses to question asking whether respondents would expect an FPS to have undergone a lesser, same, or greater amount of plastic surgery training as compared with a PS.

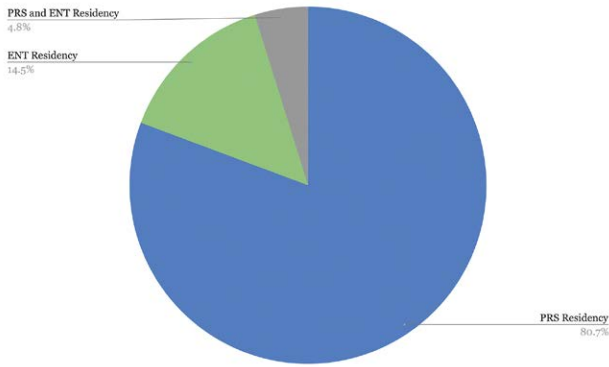


Fig. 2. Responses to question asking respondents what type of medical training they would expect an FPS to have undergone (eg, plastic surgery residency, head and neck surgery residency, fellowship, etc). ENT, ear nose, and throat; PRS, plastic and reconstructive surgery.

an FPS has no formal plastic surgery residency training would moderately to strongly negatively affect their decision to choose an FPS to perform their desired plastic surgery procedure (mean = 4.37; scale from 1 = strongly positively affected to 5 = strongly negatively affected). Respondents also reported they would be moderately to strongly unlikely to choose an FPS for a desired plastic

surgery procedure if they knew the provider had not completed a plastic surgery residency program or was not certified by the ABPS (mean = 4.54; scale from 1 = strongly unlikely to 5 = strongly unlikely).

Respondents moderately to strongly agreed that completing a plastic surgery residency program should be a requirement to publicly advertise oneself online as a PS of any sort (mean = 4.22; scale from 1 = strongly disagree to 5 = strongly agree; Fig. 4). Finally, respondents reported that their view of an FPS would be moderately to strongly negatively impacted if they were told during their search for a PS that an FPS does not complete plastic surgery residency training (mean = 4.4; scale from 1 = strongly positively impacted to 5 = strongly negatively impacted).

DISCUSSION

The accessibility of the internet and social media continue to revolutionize nearly every aspect of today’s world, including the practice of medicine, surgery, and plastic surgery.¹⁶ Furthermore, the use of social media and online marketing continues to expand as medical providers turn to these outlets to promote their practices and enterprises. Social media and the internet have consequently evolved to play a primary role in providing information to patients to empower them to make informed decisions regarding their care.¹⁷ A vast majority of plastic surgery patients

How misled would you feel (if at all) if you visited a “facial plastic surgeon” and you were told that they are formally trained in otolaryngology rather than in Plastic Surgery?

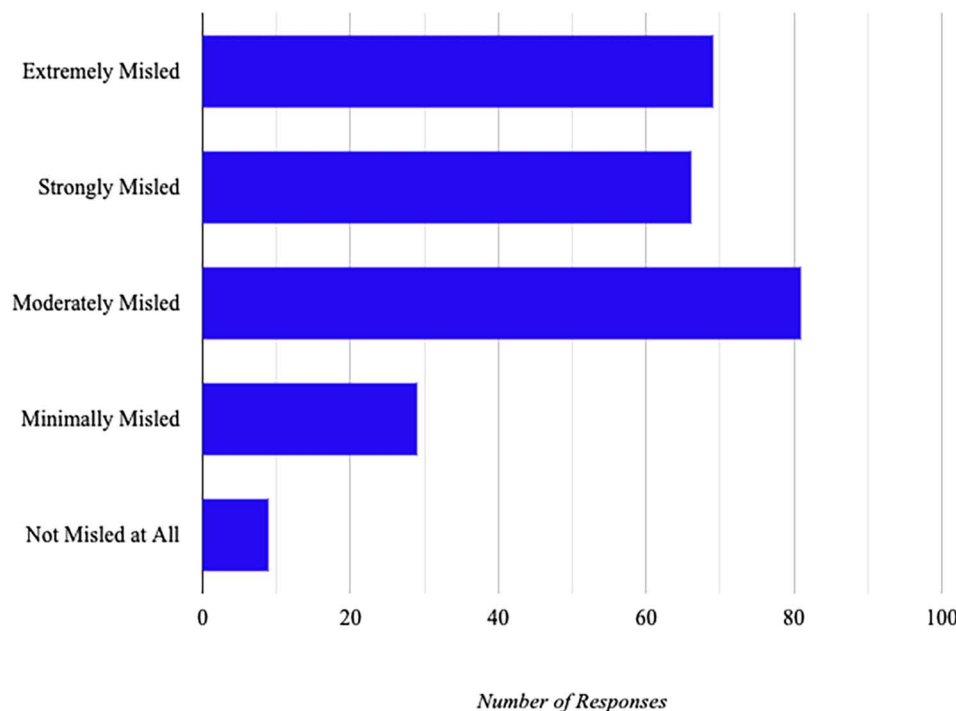


Fig. 3. Responses to question regarding how misled (if at all) respondents would feel if they visited an FPS and were later informed that they completed a residency in otolaryngology rather than in plastic surgery.

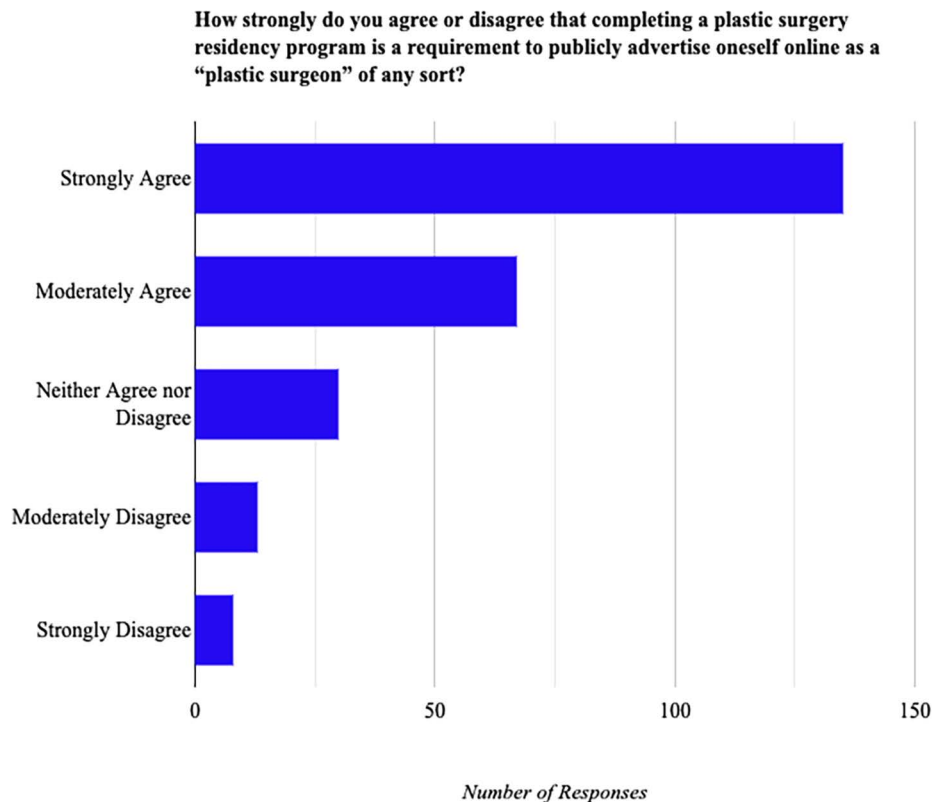


Fig. 4. Responses to question regarding how strongly respondents agree or disagree that completing a plastic surgery residency program should be a requirement to publicly advertise oneself online as a PS of any sort.

believe that the internet and social media are a valuable resource for evaluating surgeons, understanding potential procedures, and eliciting unbiased opinions.^{16,18–21}

Social media therefore has the power and potential to act as a tool for authentic medical marketing and branding, and for communicating with and educating the public.^{5,16,19,20,22} However, recent studies have shown that online plastic surgery resources often exceed the recommended sixth grade reading level as suggested by American Medical Association guidelines.^{23–25} In addition, it is unclear whether certain terminology utilized online in plastic surgery resources accurately convey the differences in training and accreditation attained by respective providers. Although there are multiple pathways to becoming a safe and effective surgeon, it is concerning that multiple studies have shown that many providers offer plastic surgery procedures in an increasingly competitive online market and often perform procedures outside of the scope of their training.^{26–28} Furthermore, it seems that only a minority of social media content related to plastic surgery is produced by fully accredited experts. Most content is posted by patients or by providers without ABPS board certification or by those with no medical background at all. As an example, 70.6% of plastic surgery-related posts on Twitter are by patients versus only 6% by PSs.^{26,29} Therefore, social media and online marketing not

only have the potential to empower patients but also to mislead patients who may be looking for resources written by a surgical provider with certain certifications and medical training.

Plastic surgery is an “amalgam of... surgical knowledge, operative judgment, [and] technical expertise”³⁰ that is free of limitations to specific anatomic boundaries and is unique in its call for “...creativity and imagination to go outside the lines [of taught principles] for advancement of the art and science” of the field.³¹ The term “plastic,” when used to describe surgery, refers to this creative and innovative surgical specialty (established in 1937 by the ABPS) and to a general philosophy and approach to molding human tissues to optimize form and function. FPSs and oculoplastic surgeons, for example, have adopted the term “plastic” based on this latter connotation. With many different players joining the field that is colloquially termed “plastic surgery” online, it is becoming more important than ever to be transparent and intentional about informing patients about the varying length, breadth, depth, and focus of training attained by different providers and of the importance and legitimacy of their accrediting bodies. Our survey respondents, most of whom have achieved higher education and all of whom reside in the US, reported that the assumptions they would tie with the

term “FPS” include completion of a residency in plastic surgery and accreditation by the ABPS. Furthermore, if potential patients learned during their visit that their FPS had not completed formal plastic surgery training, they would feel moderately to strongly misled, and this knowledge would negatively affect their decision to choose an FPS for their PS procedure. Finally, the respondents reported that they believe completing a plastic surgery residency should be a requirement to advertise oneself as a PS of any sort.

It is important to emphasize that this survey does not demonstrate, nor does it imply, the superiority of one specialty designation or training model. In fact, one of the senior authors (R.M.V.) is a fellowship-trained craniofacial PS who collaborates regularly with FPSs to provide cleft care in underserved regions and has learned complex rhinoplasty and synkinesia treatment from renowned FPSs. The reported findings only serve to highlight the poor health literacy among laypeople and the confusion caused by the current conflation of nomenclature utilized on social media, and further highlight the need to increase transparency and education regarding the different types of providers marketing themselves in the online plastic surgery industry. For example, recent studies have shown that providers accredited by the American Board of Cosmetic Surgery mostly include internists and dermatologists who market themselves online as board-certified cosmetic surgeons or PSs online. This is even though the complex aesthetic procedures they perform are outside the scope of their primary residency training. This might confuse and mislead potential patients who likely do not understand the scope of these physicians’ training and qualifications.^{32–34} The ASPS “Do Your Homework” initiative was started to address the problem of noncertified physicians performing plastic surgery and encourages patients to investigate their providers’ backgrounds.

Given that patients often rely on online advertising and information to make informed decisions, it is important for PSs to strongly assert the value of ABPS certification and adhere to exacting and honest ethical standards in both practice and advertising. PSs should also emphasize that their accrediting board, the ABPS, is a member of the American Board of Medical Specialties, unlike the American Board of Facial Plastic and Reconstructive Surgery and American Board of Cosmetic Surgery that lack such regulated institutional oversight. Many PSs seek additional training in facial procedures by pursuing aesthetic or craniofacial fellowships. Despite the wealth of additional perspective and skill these programs provide, terms such as “craniofacial” often confuse the average consumer. It is therefore incumbent on PSs—and their societies—to recapture the one word that patients understand and find reassuring when choosing an appropriate surgeon for their facial concerns: “plastic.” One option would be for PSs who specialize in facial aesthetics and/or reconstruction to identify themselves to patients as FPSs *with* ABPS certification. This would provide clarity to patients and highlight differences in training from FPSs *without* ABPS certification. By calling attention to this important

distinction, consumers are more likely to research the importance of ABPS certification. This distinction would also provide a foundation for fellowship-trained PSs who focus on facial aesthetics and/or reconstruction to further highlight and market their additional training and subspecialization.

LIMITATIONS

A limitation of this study is selection bias, as the population of MTurk workers are paid for their services and may not accurately represent the population of potential plastic surgery patients. However, our participants were evenly distributed regionally throughout the United States, are from various age groups and socioeconomic backgrounds, and have mixed demographics in terms of prior experience with plastic surgery. Therefore, we believe that the results from this study are largely applicable across all regions of the United States and the potential patient population who underwent plastic surgery. Furthermore, one potential limitation of MTurk as a surveying service could be the submission of multiple responses from one participant. A participant could cheat the system by registering more than one account with several email addresses and earn a wage by attempting to take the survey multiple times. However, Amazon has a detailed worker vetting process that requires a social security number and employee identification number and enforces strict policies against the practice of making multiple accounts. To decrease this risk, we designed our survey so that if a participant was disqualified for any reason, they were not allowed to reattempt the survey.

CONCLUSIONS

Based on the results of this study, it is apparent that despite increasing advocacy by plastic surgery professional societies and the ABPS, the public does not fully understand the differences between the training and accreditation of PSs and that of other specialists who lack ABPS certification. When informed, most feel misled and would make a different provider selection. PSs have a responsibility to continue increasing transparency and promoting understanding regarding these differences to maintain trust and provide better patient care. We believe the results of this study emphasize the critical need to unify around improved standards for social media presence and to continue engaging with and educating our potential patients by posting high-quality content online.

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DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

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