

Assessing the Prevalence of Microaggressions in Plastic Surgery Training: A National Survey

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Background: There has been increased awareness of microaggressions occurring during medical training. However, the prevalence and characteristics of microaggressions specifically in plastic surgery residency remain unknown. We aimed to fill this literature gap by conducting a nationwide survey to better understand and characterize microaggressions in plastic surgery training.

Methods: A survey was distributed between March and May 2021 via the American Society of Plastic Surgeons Resident Representatives to 1014 integrated and 214 independent track plastic surgery trainees in the United States. Multiple Pearson's chi-square of independence and Fisher exact tests evaluated comparisons of microaggressions by sex, race, Hispanic origin, sexual orientation, and year in training. A multivariate regression analysis assessed associations between variables.

Results: One hundred twenty-five participants responded to the survey (response rate: 10.2%). Of those who responded, 68.8% had experienced microaggressions in the past year. Female trainees experienced microaggressions more frequently than male trainees ($P < 0.05$). Asian trainees had higher odds to be a target of microaggressions compared with White trainees ($P = 0.013$). Nonheterosexual trainees were more likely to have experienced microaggressions compared with heterosexual trainees ($P < 0.05$). Independent trainees were more likely to experience microaggressions than PGY 1–2 and 3–4 integrated residents ($P < 0.05$).

Conclusions: Approximately seven in every 10 trainees stated that they experienced microaggressions in the past year. Females, racial minorities, sexual minorities, and independent trainees had higher odds of reporting that they experienced microaggressions. Further studies are needed to assess the implementation of strategies that address this problem to resolve inequities. (*Plast Reconstr Surg Glob Open* 2021;9:e4062; doi: 10.1097/GOX.0000000000004062; Published online 22 December 2021.)

INTRODUCTION

The term “microaggression” was first coined by Harvard University psychiatrist Chester Pierce in 1970,¹ then later modernized by Sue et al² in 2007 as “subtle snubs, slights, and insults directed toward minorities, as well as to women and other historically stigmatized groups, that implicitly communicate or at least engender hostility.” The definition is not limited to verbal abuse and includes general disrespect, devaluation, and exclusion.³

Microaggressions are often secondary to implicit or explicit prejudices or stereotypes.⁴ A recent study evaluating the breadth of the issues facing women in plastic surgery found that the culture is shifting away from overt discrimination toward a more implicit bias, in which microaggressions may manifest.⁵ There are published data that microaggressions exist in medical education, training, and practice.⁶ Microaggressions can negatively compromise health and cause long-term psychological distress, anxiety and depression that can affect work performance and result in burnout.^{3–5,7–12} Microaggressions can also impact trainees' decisions about their medical future, leading them to consider leaving medicine or retiring early.⁷

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This study aimed to determine the prevalence of microaggressions, type of microaggressions, and targets of microaggressions in whom microaggressions most commonly occur among plastic surgery trainees. We also offer suggestions and strategies for combating microaggressions in the workplace.

METHODS

A prior survey from Samora et al⁴ applied in orthopedics was modified to make it applicable for plastic surgery trainees. (See **Supplemental Digital Content 1**, which shows the plastic surgery training survey utilized to assess prevalence of microaggressions, <http://links.lww.com/PRSGO/B897>.) The voluntary, anonymous survey was created using SurveyMonkey (SurveyMonkey, San Mateo, Calif.) and distributed via the American Society of Plastic Surgeons Resident Representatives to a total of 1014 integrated and 214 independent plastic surgery trainees in the United States. The survey was first distributed on March 9, 2021. Reminders to complete the survey were distributed on March 14, 20, April 5, and May 4, 2021. Access to the survey was closed on May 11, 2021. It consisted of 15 questions including eight questions querying information about demographics, such as age, race, gender (biologic sex), sexual orientation, postgraduate year (PGY), and region of residency, and seven specific questions relating to microaggressions. These last questions had multiple choice answers, including one open-ended question. Responses related to microaggressions were compared by gender, race, sexual orientation, Hispanic origin, and PGY.

Statistical Analysis

Multiple Pearson's chi-square tests of independence and Fisher exact tests evaluated comparisons of microaggressions by sex, race, sexual orientation, Hispanic origin, PGY, and region of residency. A multivariate regression analysis was performed to find associations. Some participants did not answer all questions (see **Supplemental Digital Content 2**, which shows participant characteristics and answers, <http://links.lww.com/PRSGO/B898>), but the analyses were performed by answer choice which enabled evaluation of independent associations. A *P* value lower than 0.05 and a confidence interval (CI) of 95% were considered significant for all analyses. Data were analyzed using SPSS, version 23 (IBM, Armonk, N.Y.).

RESULTS

A total of 125 responses were analyzed (response rate = 10.2%). Overall, 68.8% of plastic surgery trainees stated that they have been targets of microaggressions within the past year. Furthermore, 64% reported they have been silent witnesses of microaggressions, and 13.6% have been perpetrators of microaggressions in the last year. In total, 53.6% of trainees reported that despite having been a target of microaggressions, they have also been perpetrators and/or silent witnesses of microaggressions in the last year (Fig. 1).

Statistical differences were found in response to some questions. In general, female trainees experienced

Takeaways

Question: What is the prevalence of microaggressions in plastic surgery training in the United States?

Findings: In the past year, 68.8% of plastic surgery residents experienced microaggressions: female trainees were more likely to experience microaggressions than male trainees; Asian trainees had a higher odds of being a target of microaggressions compared to Caucasian trainees; nonheterosexual trainees were more likely to have experienced microaggressions compared to heterosexual trainees; and independent trainees were more likely to experience microaggressions than PGY 1-2 and 3-4 integrated residents.

Meaning: Microaggressions are prevalent in plastic surgery training in the United States with 68.8% of trainees experiencing microaggressions in the past year.

microaggressions more frequently than male trainees ($P < 0.05$, Table 1). Table 2 shows statistical differences of microaggressions by race, Hispanic origin, sexual orientation, and PGY. All the trainees who experienced exclusion of their title in "introductions, correspondence, etc.," were Hispanic ($P = 0.037$, Table 2). Descriptive analysis is shown in **Supplemental Digital Content 2**, which shows participant characteristics and answers (<http://links.lww.com/PRSGO/B898>).

Multivariate Analysis

Compared with male trainees, female trainees were significantly more likely to report male surgeons as the perpetrators of microaggressions [odds ratio (OR), 2.99; 95% CI, 1.33–6.71; $P = 0.008$] (Table 3). Female trainees had higher odds of being questioned about their strength and/or ability (OR, 20.76; 95% CI, 6.24–69.05; $P < 0.001$) and observing that pregnancy and/or family planning were discussed in a negative way (OR, 13.22; 95% CI, 4.00–43.73; $P < 0.001$). Similarly, they had more likelihood to report that their way of being (voice, behavior, and/or personality) was discussed in a negative way because of their gender (OR, 3.25; 95% CI, 1.36–7.78; $P = 0.008$), and that they would be asked to do something that would not be requested of the opposite gender (OR, 6.85; 95% CI, 2.82–16.64; $P < 0.001$). They also have higher odds to be mistaken for a nurse, surgical sales representative ("rep"), or physician assistant by their coworkers (OR, 19.45; 95% CI, 7.22–55.42; $P < 0.001$), by patients or patient's family (OR, 305.68; 95% CI, 33.93–2754.17; $P < 0.001$), and note underrepresentation of women on the podium at meetings (OR, 5.87; 95% CI, 2.41–14.27; $P < 0.001$) compared with their male counterparts. Finally, female trainees had higher odds of being treated differently by staff (OR, 9.19; 95% CI, 3.47–24.34; $P < 0.001$), and not to have lead shielding sized for their frame while working in the operating room (OR, 13.71; 95% CI, 4.78–39.36; $P < 0.001$) (Table 3).

Associations were found for microaggressions by race, sexual orientation, and PGY status (Table 4). Asian

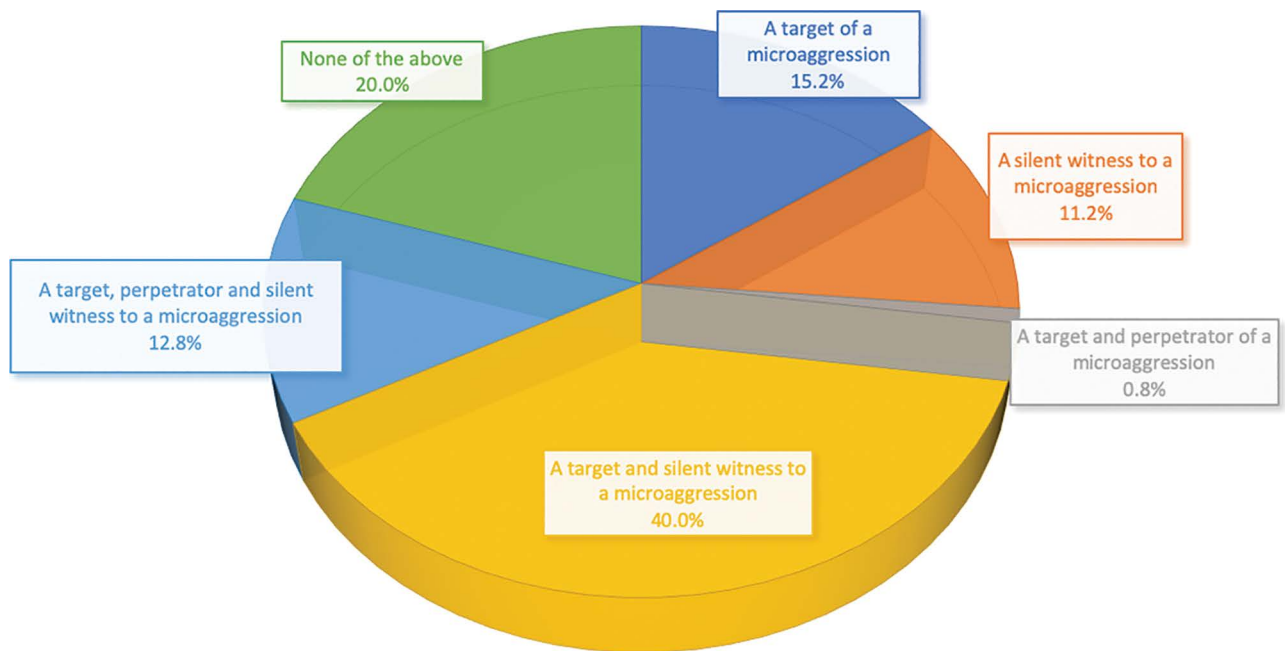


Fig. 1. Percentage of responses to question 9. Participants who selected more than one answer were grouped. Question 9: Microaggression is defined as unintentional verbal, nonverbal, or environmental slights or insults, which convey hostile, derogatory, or otherwise negative messages. In the last year, I have been...

trainees were more likely to be a target of microaggressions compared with White trainees (OR, 4.62; 95% CI, 1.39–15.36; $P = 0.013$) (Table 4).

There were higher odds for nonheterosexual trainees to think that the materials in lectures/continuing medical education/formal presentations were demeaning to their gender or sexual orientation (OR, 6.23; 95% CI, 1.15–33.70, $P = 0.034$), and to be treated differently by staff because of their gender or sexual orientation (OR, 4.32; 95% CI, 1.12–16.68; $P = 0.034$) compared with heterosexual trainees.

When evaluating the PGY level, there were higher odds for integrated PGY 3–4 (OR, 6.19; 95% CI, 1.67–22.94; $P = 0.006$) to report being silent witnesses of microaggressions compared with independent trainees. Integrated PGY 1–2 trainees were less likely to be mistaken by a nurse, representative, or physician assistant by a patient or patient's family (OR, 0.05; 95% CI, 0.003–0.68; $P = 0.025$) than independent trainees. In addition, integrated PGY 3–4 residents were less likely to be treated differently by staff (OR, 0.23; 95% CI, 0.06–0.84; $P = 0.026$) compared with independent trainees.

Table 5 summarizes the qualitative microaggressions that participants experienced, which were not included in the statistical analyses.

DISCUSSION

Microaggressions have previously been reported in surgical specialties.^{6,13,14} A 2020 survey completed by 1624 general surgery residents (estimated response rate: 10.2%) and surgical subspecialty residents (estimated response rate: 10.2%) in the United States identified that microaggressions more commonly came from patients,

followed by staff, faculty, and coresidents.¹³ Only 7% of the trainees reported these events to the graduate medical education office or program director. The majority of the participants who reported any type of microaggression felt that reporting did not lead to a change in the program. Moreover, 30% of those who reported felt they experienced retaliation due to reporting. This is worrisome, as it shows that surgical programs may not recognize microaggressions as an issue and may remain reluctant to develop strategies to cope with these situations and support trainees who experience microaggressions. The purpose of this study was to determine the types of microaggressions that exist in plastic surgery training and recommend strategies to alleviate their burden.

Our study found that women were more likely to report experiencing microaggressions than men in plastic surgery training, which correlates with other studies that identified more frequent microaggressions in female trainees and faculty.^{6,13} For surgical trainees, the most commonly reported microaggressions included environmental aggressions that create a perception that women do not belong in surgery, assumptions of inferiority in terms of strength and commitment, and assumptions of traditional gender roles related to career plans, personality, and leadership.¹⁴ These microaggressions can persist throughout surgical training despite academic accomplishment. Female faculty in medicine have reported microaggressions in the form of sexism, biases related to pregnancy and childcare, having abilities underestimated, encountering sexually inappropriate comments, being relegated to mundane tasks, and feeling marginalized.⁶

Even though microaggressions can affect women at any stage of their career, the prevalence of microaggressions

Table 1. Percentage of Subjects Responding with a Positive Answer to Microaggressions by Sex: Women versus Men

Microaggressions	Men, n (%)	Women, n (%)	P*
Q9. In the last year, participants have been...			
A. A target of a microaggression	36 (41.9%)	50 (58.1%)	0.085
B. A perpetrator of a microaggression	10 (58.8%)	7 (41.2%)	0.434
C. A silent witness to a microaggression	35 (43.8%)	45 (56.3%)	0.353
Q10. Participants identified the individuals who have been the most likely to partake in microaggressions in the past year as...			
A. patients/patients family	41 (45.1%)	50 (54.9%)	0.546
B. Male surgeons	31 (38.3%)	50 (61.7%)	0.009
C. Female surgeons	29 (55.8%)	23 (44.2%)	0.146
D. Other male medical professionals	22 (44.9%)	27 (55.1%)	0.716
E. Other female medical professionals	24 (42.1%)	33 (57.9%)	0.369
F. Male support staff	18 (46.2%)	21 (53.8%)	1
G. Female support staff	27 (44.3%)	34 (55.7%)	0.592
Q11. During residency/fellowship...			
A. Strength and/or ability was questioned because of their gender or sexual orientation	4 (9.8%)	37 (90.2%)	<0.001
B. Material in lectures/CME/formal presentations were demeaning to their gender or sexual orientation	3 (30.0%)	7 (70.0%)	0.332
C. Participants were told they should not be a plastic surgeon because of their gender or sexual orientation	3 (21.4%)	11 (78.6%)	0.049
D. Participants were told they will not be a good plastic surgeon because of their gender or sexual orientation	4 (28.6%)	10 (71.4%)	0.164
E. Pregnancy and/or family planning were discussed in a negative way	4 (12.1%)	29 (87.9%)	<0.001
F. Participants responded that there were inappropriate photos displayed in the workplace	4 (36.4%)	7 (63.6%)	0.538
G. Participants received inappropriate comments made regarding their gender or sexual orientation	6 (24%)	19 (76%)	0.013
Q12. During residency/fellowship...			
A. Appearance was commented on in a negative way	15 (44.1%)	19 (55.9%)	0.693
B. Way of being (voice, behavior, personality) was discussed in a negative way because of their gender	11 (29.7%)	26 (70.3%)	0.018
C. Participants were asked to do something that would not be requested of the opposite gender (eg, take earrings out of patient prior to surgery)	10 (21.7%)	36 (78.3%)	<0.001
Q13. During residency/fellowship, participants...			
A. Were excluded from social events because of their gender or sexual orientation	6 (40.0%)	9 (60.0%)	0.593
B. Missed training opportunities because of their gender or sexual orientation	3 (27.3%)	8 (72.7%)	0.214
C. Had their title excluded in introductions, correspondence, etc.	3 (9.7%)	28 (90.3%)	<0.001
D. Had been mistaken for a nurse, rep, PA, etc. by their coworkers	9 (15.5%)	49 (84.5%)	<0.001
E. Had been mistaken for a nurse, rep, PA, etc. by a patient or patient's family	12 (15.8%)	64 (84.2%)	<0.001
F. Had been mistaken for a nurse, rep, PA, etc. at a meeting	3 (12.5%)	21 (87.5%)	<0.001
G. Noted underrepresentation of women on the podium at meetings	9 (21.4%)	33 (78.6%)	<0.001
H. Had their orders, technique, or decisions questioned because of their gender or sexual orientation	2 (7.4%)	25 (92.6%)	<0.001
I. Were treated differently by staff because of their gender or sexual orientation	9 (20.0%)	36 (80.0%)	<0.001
Q14. During residency/fellowship, participants...			
A. Were excluded from the "Doctor's lounge/locker room" due to their gender or sexual orientation	0 (0.0%)	5 (100.0%)	0.059
B. Experienced fewer locker room resources due to their gender or sexual orientation	2 (12.5%)	14 (87.5%)	0.003
C. Saw signage that the nurse's locker room = women's locker room	1 (9.1%)	10 (90.9%)	0.010
D. Did not have physical resources available to breastfeed/ pump while working	0 (0%)	10 (100%)	0.002
E. Did not have lead shielding sized for their frame while working in the OR	5 (11.9%)	37 (88.1%)	<0.001

*Pearson chi-square of independence and Fisher exact tests.

has been reported to be higher in trainees than attendings in surgical specialties.¹⁵ Barnes et al⁷ reported that female trainees in male-dominated surgical specialties experienced more frequent, stressful, and bothersome microaggressions. They also identified that these trainees more frequently felt the need to overcompensate for being female and appear more assertive than trainees in Ob-Gyn.⁷

Gender discrimination and implicit bias play an essential role when gender inequalities take place.⁵ Historically, gender discrimination occurred openly and was easily identifiable.¹⁶ More recently, this has manifested in the form of microaggressions. Our survey found that female trainees were more likely to identify male surgeons as the perpetrators of microaggressions compared with their male counterparts, which may be related to implicit bias limiting the recognition of a perpetrator as a person with whom we self-identify. In academic surgery, women are 10 times more likely to experience gender discrimination than men.¹⁷ Approximately 50% of the National Association of Women Surgeons members had experienced or witnessed gender discrimination during education, training, and practice.¹⁸

Female underrepresentation and gender inequality have been present in plastic surgery, affecting trainees' mental health and well-being.¹⁵ Parmeshwar et al¹⁹ reported that female plastic surgery residents accounted for only 25% and 35% of total residents in independent programs and integrated programs, respectively, between 2010 and 2016. Even though a small increase of female residents was observed over time, a decrease in female applicants was also noted.¹⁹ Gender inequalities have occurred more often in women than in men.¹⁷ Two studies evaluating gender differences in plastic surgery demonstrated that there is a general lack of support for pregnancy and childcare, lack of role models and sponsorship to endorse women into leadership positions, difficulties in work-life balance, limited opportunities of collaboration and funding, and disadvantages to reach academic goals.^{20,21}

Racial discrimination has also been reported to be associated with microaggressions.^{12,22-24} Racial microaggressions in form of messages that assume inferiority, criminality, and sameness have been described.^{2,25,26} Chisholm et al²² reported that under-represented racial minorities were significantly more likely to experience race-related microaggressions during medical school. Similar results were reported in surgeons

Table 2. Percentage of Subjects Responding to Questions about Microaggressions by Race, PGY, Region of Residency Program, and Sexual Orientation

Microaggressions	No, n (%)	Yes, n (%)	P*
Q9. In the last year, participants have been...			
A. A target of a microaggression			
Race			0.005
White	34 (87.2%)	50 (58.1%)	
Asian	4 (10.3%)	23 (26.7%)	
African Americans and others	1 (2.6%)	13 (15.1%)	
C. A silent witness to a microaggression			0.004
PGY			
Independent PGY 1, 2, 3	6 (13.3%)	11 (13.8%)	
Integrated PGY 1–2	4 (8.9%)	29 (36.3%)	
Integrated PGY 3–4	22 (48.9%)	23 (28.7%)	
Integrated PGY 5–6	13 (28.9%)	17 (21.3%)	
Q11. During residency/fellowship, participants...			
B. Thought material in lectures/CME/formal presentations were demeaning to their gender or sexual orientation			0.069
Sexual orientation			
Heterosexual	105 (91.3%)	7 (70.0%)	
Nonheterosexual	10 (8.7%)	3 (30.0%)	
C. Were told they should not be a plastic surgeon because of their gender or sexual orientation			0.006
Sexual orientation			
Heterosexual	103 (92.8%)	9 (64.3%)	
Nonheterosexual	8 (7.2%)	5 (35.7%)	
G. Received inappropriate comments regarding their gender or sexual orientation			0.004
Sexual orientation			
Heterosexual	94 (94.0%)	18 (72.0%)	
Nonheterosexual	6 (6.0%)	7 (28.0%)	
Q13. During Residency/Fellowship, participants...			
E. Had been mistaken for a nurse, rep, PA, etc., by a patient or patient's family			0.231
PGY			
Independent PGY 1, 2, 3	15 (13.6%)	2 (13.3%)	
Integrated PGY 1–2	32 (29.1%)	1 (6.7%)	
Integrated PGY 3–4	37 (33.6%)	8 (53.3%)	
Integrated PGY 5–6	26 (23.6%)	4 (26.7%)	
I. Were treated differently by staff because of their gender or sexual orientation.			0.045
Sexual orientation			
Heterosexual	75 (93.8%)	37 (82.2%)	
Nonheterosexual	5 (6.3%)	8 (17.8%)	
PGY			0.289
Independent PGY 1, 2, 3	12 (15.0%)	5 (11.1%)	
Integrated PGY 1–2	25 (31.3%)	8 (17.8%)	
Integrated PGY 3–4	26 (32.5%)	19 (42.2%)	
Integrated PGY 5–6	17 (21.3%)	13 (28.9%)	

Questions not shown in this table were not statistically significant for race, sexual orientation, or PGY.

*Pearson chi-square of independence and Fisher exact tests.

and anesthesiologists, in which race-related microaggressions were experienced in 81% of racial-minority physicians.¹³ Farid et al²³ reported a 31% of racial microaggressions in a cohort of gynecology faculty, fellows, and residents. Our study found that Asian trainees were more likely to be a target of microaggressions compared with White trainees. In a previous study, multiracial people have also experienced feelings of being treated like a second-class citizen, being exoticized, or being assumed to be a foreigner by White people and people of color.²⁴ Therefore, further studies should explore microaggressions in detail among all racial minorities.

Microaggressions have also been reported in sexual minorities such as lesbians, bisexuals, gays, and queers.²⁷ Platt et al²⁷ identified that these sexual minorities experienced microaggressive statements that assumed the heterosexual behavior as normal and expected. In contrast, nonheterosexual behavior was considered sinful and morally deviant. In addition, these statements reflected homophobia, used heterosexist terminology, expressed oversexualization (thoughts that all nonheterosexual individuals are primarily interested in sex and physical gratification only) and undersexualization (a level of acceptance

but only when the person is not actively in a relationship), and delivered microaggressions in a joking or humorous manner. Our findings identified microaggressions in nonheterosexual plastic surgery trainees for the first time.

Microaggressions have been documented to be more common in internal medicine trainees with a higher PGY level, although occurring at all levels of training.²⁸ Our study found that integrated PGY 3–4 trainees were more likely to report being silent witnesses of microaggressions than independent trainees. Microaggressions occurred mainly in independent trainees. Possible explanations for these findings are that integrated trainees might normalize microaggressions along the years of academic training or prefer to be silent due to the lack of support from their institution and fear of retaliation, as previously mentioned. Independent trainees may be more likely to experience microaggressions as they have recently joined a new program to continue their training, making them seen as unfamiliar by patient's family or other health providers.

To address microaggressions, we should understand implicit bias as the origin of most of the microaggressions. Implicit bias is an automatic cognitive process that refers

Table 3. Multivariate Logistic Regression that Evaluated Associations of Microaggressions for Females versus Males*

	OR	Lower CI	Upper CI	P
Q10B. Participants thought “male surgeons” have been the most likely to partake in microaggressions in the past year	2.99	1.33	6.71	0.008
Q11. During residency/fellowship, participants’ ...				
A. Strength and/or ability was questioned because of their gender or sexual orientation	20.76	6.24	69.05	<0.001
E. Pregnancy and/or family planning was discussed in a negative way	13.22	4.00	43.73	<0.001
Q12. During residency/fellowship, participants...				
B. Way of being (voice, behavior, personality) was discussed in a negative way because of their gender	3.25	1.36	7.78	0.008
C. Were asked to do something that would not be requested of the opposite gender (eg, take earrings out of patient prior to surgery)	6.85	2.82	16.64	<0.001
Q13. During residency/fellowship, participants...				
D. Had been mistaken for a nurse, rep, PA, etc., by their coworkers	19.45	7.22	52.42	<0.001
E. Had been mistaken for a nurse, rep, PA, etc., by a patient or patient’s family	305.68	33.93	2754.17	<0.001
G. Noted underrepresentation of women on the podium at meetings	5.87	2.41	14.27	<0.001
I. Were treated differently by staff because of their gender or sexual orientation	9.19	3.47	24.34	<0.001
Q14. During residency/fellowship, participants...				
E. Did not have lead shielding sized for their frame while working in the OR	13.71	4.78	39.36	<0.001

Questions 11 (options C, D, F, and G), 13 (options A, B, C, F, and H), and 14 (options A, B, C, and D) could not be analyzed due to lack of cases in one category. Remaining questions not displayed in this table were not statistically significant for sex.

*Adjusted by race, Hispanic origin, sexual orientation, and PGY.

to personal prejudices that are not perceived consciously and unconscious decisions we make in specific situations.²⁹ Although it is difficult to say how much implicit bias may affect our thinking, perception, and behavior, it is important to acknowledge that implicit bias can influence our decisions, lead us to become a perpetrator of microaggressions and, as a consequence, undermine our social and academic environment.

Recommendations to decrease biases and microaggressions in plastic surgery include the following.

Recognizing the Problem

It is important to understand that our biases are multifactorial and variable, often a result of our cultures, experiences, and stereotypes acquired during life. Kang and Kaplan³⁰ contend that testing ourselves for implicit bias via the implicit association test (<https://implicit.harvard.edu/implicit/takeatest.html>) may help us to accept and recognize our biases. Acknowledging the existence of biases in ourselves, our work environment, and the society is essential to combatting them.³¹

Individual Daily-based Action

Bystanders are defined as “anyone who become aware of and/or witness unjust behavior or practices that are worthy of comment or action.”^{32,33} Everyone should feel empowered to speak out against microaggressions, addressing and correcting these situations on a daily basis. Addressing the situation in the moment enables the perpetrator to realize his/her action, and reinforces the idea that we need to be careful with our expressions and behaviors.

In an effort to support active bystanders to redirect negative actions such as microaggressions and make an important change, the “upstander” term has been proposed. *Upstanders* are those who can speak and make a change against microaggressions.³⁴ Therefore, we should aim to develop strategies to disrupt microaggressions and become upstanders.

Warner et al³⁵ has been established one method to address microaggressions using the acronym GRIT:

1. Gather our thoughts—We should not react with anger, but decide if it is the appropriate time or place to address the perceived microaggression.
2. Restate the comment or ask the speaker to restate their comment—We may give an opportunity to the person to clarify or realize the potential negative impact of the words or action.
3. Inquire and seek clarification without being judgmental.
4. Talk about the potential impact on others and your personal perception—By separating the comment from the person, we may be more assertive, promote open communication and help others recognize their flaws.³⁵

The person who committed a microaggression can benefit by having a notebook where he/she can write down the situation encountered. This may help acknowledge the behavior and avoid similar future situations.

Institutional Action

A protocol that outlines the steps to follow when microaggressions occur could aid the victim in addressing the situation, appropriately reporting it, and feeling supported by the institution. This can reduce the upstanders’ concern of any potential institutional retaliation.³⁶ Men, as the less affected group in microaggressions, can help decrease gender inequalities as upstanders.³⁷

Implementation of workshops to help detect and manage microaggressions can benefit plastic surgery trainees. For instance, participation in workshops that talk about microaggressions has increased awareness, helped develop strategies to respond to microaggressions, and increased familiarity with institutional support systems.³⁸ In addition, workshops can help increase confidence in initiating the discussion of these topics with colleagues and trainees.³⁹

SPONSORSHIP

Sponsorship has been associated with academic success and career advancement of young professionals.⁴⁰ Apart from giving advice and feedback, sponsors can use their

Table 4. Multivariate Logistic Regression that Evaluated Associations of Microaggressions by Race, PGY, and Sexual Orientation *

	OR	Lower	Upper	P
Q9A. Participants who have been a target of a microaggression in the past year				
Race				
Asian (versus White)	4.62	1.39	15.36	0.013
African Americans and others (versus White)	7.42	0.85	64.97	0.070
Q9C. Participants who have been a silent witness to a microaggression in last year				
PGY				
Integrated PGY 1–2 (vs. Independent PGY 1, 2, 3)	1.66	0.45	6.04	0.443
Integrated PGY 3–4 (versus Independent PGY 1, 2, 3)	6.19	1.67	22.94	0.006
Integrated PGY 5–6 (versus Independent PGY 1, 2, 3)	0.83	0.31	2.22	0.705
Q11B. Participants thought material in lectures/CME/formal presentations were demeaning to their gender or sexual orientation				
Sexual orientation				
Nonheterosexual (versus heterosexual)	6.23	1.15	33.70	0.034
Q13E. Participants had been mistaken for a nurse, rep, PA, etc., by a patient or patient's family				
PGY				
Integrated PGY 1–2 (versus Independent PGY 1, 2, 3)	0.05	0.003	0.68	0.025
Integrated PGY 3–4 (versus Independent PGY 1, 2, 3)	0.95	0.17	5.34	0.954
Integrated PGY 5–6 (versus Independent PGY 1, 2, 3)	0.52	0.10	2.60	0.425
Q13I. Participants were treated differently by staff because of their gender or sexual orientation				
Sexual orientation				
Nonheterosexual (versus heterosexual)	4.32	1.12	16.68	0.034
PGY				
Integrated PGY 1–2 (versus Independent PGY 1, 2, 3)	0.84	0.19	3.76	0.822
Integrated PGY 3–4 (versus Independent PGY 1, 2, 3)	0.23	0.06	0.84	0.026
Integrated PGY 5–6 (versus Independent PGY 1, 2, 3)	0.84	0.27	2.59	0.758

Questions 11 (options C, D, F, and G), 13 (options A, B, C, F, and H), and 14 (options A, B, C, and D) could not be analyzed due to lack of cases in one category. Remaining questions not displayed in this table were not statistically significant for race, sexual orientation, Hispanic origin, or PGY.

*Adjusted by biologic sex, race, sexual orientation, Hispanic origin, and PGY.

influence to advocate for mentees.⁴¹ Although women and men are equally likely to have mentors, women are less likely to have sponsors.^{31,40,42,43} Similarly, other under-represented minorities have had fewer mentorship opportunities.^{44,45}

A sponsor facilitates important professional connections, enhances career opportunities, and can play a role in decreasing inequalities.⁴⁶ A sponsor may encourage women and other minorities to actively participate in academic and leadership roles and reach goals, generating inclusion. By increasing opportunities for minorities to reach high-level academic and professional positions, there may be an increase in minority representation, with the ultimate goal of increasing equality. With better representation, microaggressions are less likely to occur.

HOLISTIC SELECTION PROCESSES

Most current selection processes for trainees and faculty are inherently flawed. A more holistic approach, which takes into consideration not only the objective criteria of applicants, but also the grit, interpersonal skills, and teamwork, may improve the diversity of the field.⁴⁷ Increasing the number of evaluators and potential applicants of minority groups (eg, the “Rooney Rule”), and utilizing structured interviews may decrease selection bias.³⁰ Although the impact of these actions still needs to be addressed, these proposed actions may help decrease the inequalities and increase opportunities for minorities in plastic surgery.

LIMITATIONS

There are some limitations to this study, with the primary limitation being a low response rate. However, this low

response rate aligns with Alimi et al's study¹³ that identified an estimated response rate of 10.2% for subspecialty surgical residents when evaluating microaggressions. Possible explanations for this low response rate may be related to the sensitivity of the topic, difficulty in recognition, or the feeling that a survey would not produce any substantial improvement and was therefore not worth the time. The statistical analyses confirmed multiple significant associations of microaggressions, but there may be respondent and recall bias. PGY association in question 13, option I, may exemplify a response bias; the participants may have felt being treated differently independently of their gender or sexual orientation. In addition, even though we found differences in microaggressions according to sexual orientation, it should be noted that the low proportion of nonheterosexual trainees may have influenced this result.

Another limitation is the use of a survey which has not been previously validated or reported to be reliable. Nonetheless, this is a survey that was modified from a prior study.⁴

CONCLUSIONS

Approximately seven in every 10 plastic surgery trainees reported experiencing microaggressions in the past year, with female plastic surgery trainees experiencing microaggressions more often than their male counterparts. Asians and nonheterosexual trainees were more likely to be targets of microaggressions. Further work is needed to address microaggressions by implementing strategies that help educate, recognize, and mitigate these situations and generate equity and respect in the workplace.

Table 5. Answers to Question 15: Please List Any Other Microaggressions in Plastic Surgery That You Have Experienced or Witnessed during Your Residency/Fellowship That Were Not Included in This Survey

“Inappropriate comments potentially alluding to a female coresident’s sexuality (‘you really like to touch things’)”

“It was discussed at performance evaluation that breastfeeding was ‘taking too long’ and it was implied that I was ‘taking advantage’ of breastfeeding to get out of work”

“I was told during performance evaluation that faculty didn’t think I ‘appeared engaged’ and that it would be better if I smiled more”

“I was repeatedly told that my commitment to my career was in question by many faculty after having multiple children during residency”

“I am routinely disrespected by nurses and occasionally PAs because of my gender and this results in significant burnout”

“I heard comments from attendings saying, ‘I thought she was going to be docile’ of a woman surgeon with an ethnic background”

“Attendings talking about female residents and medical students and their weaknesses to male residents and support staff, and sometimes publicly in front of nurses and other medical students”

“A female attending removing instruments from female residents’ hands and then letting male residents do the entire operation without teaching the female residents”

“As a male trainee (and father of 3), I was repeatedly expected to ‘suck it up’ and take multiple days of specialty call in a row (up to 6 consecutive days of hand, face on at least 7 occasions over the past 2 years) to cover NON-maternity vacation for my female junior resident. However, this was not reciprocated and she was restricted to 2–3 days consecutive call only in dire circumstance. She was also not expected to payback her missed calls. I had to move my time off requests to prevent her from having consecutive call days and was also allotted less total vacation days with more stringent criteria applied to my time-off. Furthermore, I was not authorized post-call days, but my female colleague was on several occasions”

“Being hit on by patients and others in the work place”

“Cafeteria provides free lunch to doctors. The male second year resident regularly was NOT charged for lunch even while I was charged every time”

“Comments about looking too young to be a doctor”

“Copious racial micro-aggressions. Sometimes added on top of gender micro-aggressions”

“Demeaning comments made towards residents by support staff regarding level of training or efficiency”

“Favoritism, comparison between residents and prior residents”

“Female staff are awful to female surgical trainees and have been the primary source of aggression in my training, consistently questioning orders and requests in ORs, consistently ignoring requests for instruments during surgery, and consistently complaining to their supervisors about my behavior more so than they behave towards male surgical trainees or attendings. Female attendings have been more critical than male attendings. Male staff and attendings have done this minimally in comparison in my experience”

“I had my lunch choices questioned/mockered ‘if I really needed that,’ and I’m a normal BMI. Told a patient’s family I was huge. I witnessed a Jewish person’s yarmulke being mocked by an attending and several ‘jokes’ among those lines”

“Hard to remember at this time but I know my female co-residents often get sexually harassed, get mistaken as a nurse, they are not called doctors by patients or by staff-surgeons sometimes. Sometimes people were aggressive to me because they were upset in their own lives or questioned my technique due to lack of skill or got frustrated if I wasn’t assisting well but it was not due to my gender”

“I am a white male. None noted towards me. My program is predominantly female and I note the presence of a majority of these microaggressions, particularly from female attendings and nurses. The resources provided for pregnant and breastfeeding female residents is laughable”

“I was disciplined for a patient care issue, even though protocol was followed. However, a male resident who failed to follow protocol in this same patient care, went undisciplined. Additionally, new academic protocols were strictly implemented in my case, whereas they were not implemented at all for male residents”

“I was told in one of the ORs that is typically an ortho room that if I wanted my size gloves (6) I would need to go and get them myself because they didn’t keep it in the room. The OR staff pulled a 6.5 instead, which I only found out about when I scrubbed in. My options were to operate in too large gloves or scrub out and get my own, the circular wasn’t willing to do it because ‘that’s what all the small women Ortho residents do.’ I am not an ortho resident, and it isn’t okay that they treat their women this way on a daily basis”

“Microaggressions against Asians. Saying I look like samurai then making Bruce Lee sounds”

“Operating room interactions with OR staff (circulator/scrub nurses—often other females) were negative based on my gender. Male attending surgeon directly made jokes about pregnant residents to me”

“Pressure to conform to other’s standards or viewpoints”

“Residents being demeaning due to appearance, others in program not being helpful as they would to other colleagues, faculty making comments about my appearance including very hurtful ones that I felt helpless to speak on due to retaliation, too many to list. Thanks for the work you are doing, it is much needed in our field”

“Snarky comments that are unnecessary about men in general from female attendings”

“Towards my race”

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