Microaggressions and Implicit Bias in Hand Surgery

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KEYWORDS

• Implicit bias • Microaggression • Intersectionality • Hand surgery • Academic surgery • Surgery

KEY POINTS

- *Implicit bias* is an unconscious, automatic association that is either disadvantageous or favorable toward a person or group.
- A *microaggression* is an intentional or unintentional statement or action that is perceived as discriminatory against a marginalized community, emanating as the product of bias.
- *Intersectionality* is a concept that describes the exponential discrimination toward individuals who belong to more than one marginalized group, such as their racial and ethnic group and gender affiliation.
- Implicit bias and microaggressions that negatively affect marginalized groups are ubiquitous in medicine (including Hand Surgery), which contribute to health and health care disparities for patients, as well as poor representation and burnout of marginalized groups within the medical community.
- Although awareness is the first step to combating bias and microaggressions, active steps should be taken to minimize the negative effects of these phenomenon, starting with taking an implicit bias test to understand your own biases.

INTRODUCTION

Implicit bias and microaggressions are well-established principles in psychology supported by increasing amounts of empirical evidence.[1,2] Researchers have investigated several different environments to reveal how implicit bias affects large-scale organizations, business ventures, and interpersonal relationships across a variety of settings.[3,4]

Research on health care disparities has grown significantly in recent years, revealing consistent themes of inequalities in access to care and clinical outcomes associated with racial and ethnic minority groups, individuals of lower socioeconomic status, and residents of defined geographic areas.[5,6] Within medicine, findings of disparities related to race, gender, and sexual orientation have also been found in the training environment. One of the main factors contributing to these findings is underlying bias.[7] Societal standards have transformed biases in our daily lives to be less explicit, manifesting instead as implicit bias and microaggressions and other more subtle forms of discrimination and bias.[8] Implicit bias has been shown to affect patient care decision making in physicians with correlation of levels of bias and lower quality of care.[9]

Hand Surgery, with an eclectic patient mix and a group of providers who are often working in multidisciplinary teams, also has evidence of disparities in patient care and education that is founded in bias. Academic societies are in the process of focusing on addressing these issues for practicing surgeons and trainees.[10]

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The authors aim to provide definitions and enhance awareness of implicit bias and microaggressions, highlight areas in Hand Surgery that manifest these issues, summarize relevant literature, and provide a practical evidence-based framework to guide surgeons in their practices.

DEFINITIONS AND BACKGROUND

Implicit bias is an unconscious, automatic association that is either disadvantageous or favorable toward a person or group. Although prejudice is not a new concept, implicit bias defines biases that are uncontrollable, intuitive, and irrational. Implicit bias can present itself as a preference, leading to outcomes that undermine trust. Although societal standards have evolved to disfavor explicit bias, implicit bias is harder to recognize even by the recipient.[8] There is evidence that implicit bias favoring in-groups and dominant groups and also disfavoring out-groups develops as early as 6 years old.[11,12]

A *microaggression* is a statement or action, conscious or unconscious, that is perceived as discriminatory against a marginalized community, the product of implicit bias. Originally defined in 1970 by Dr Chester Pierce to describe subtle forms of racism in the post-Jim Crow era,[13] it has evolved as discrimination has become more subtle, and it spans across multiple target groups, whether based on race, gender, sexuality, or other marginalized groups.[8] Microaggressions are admittedly difficult to navigate because they can be subjective in nature and interpretation. There are 4 defined forms of microaggression that are summarized in the following discussion, and in **Table 1** where examples are provided[14,15]:

1. Microassault: Discriminatory action or comment that is intentionally performed/spoken; however, it may not be meant to be offensive.
2. Microinsult: Unconscious verbal or nonverbal subtle rudeness or insensitivity that demeans a person's identity.
3. Microinvalidations: Unconscious acts or words that negate, undermine, or nullify the feelings and reality of a marginalized person/group.
4. Environmental microaggressions: Systemic rules or physical environments that exclude, underpin vulnerability, and perpetuate inequity.

Implicit bias and microaggression by themselves or in combination affect the individuals involved and the relationship between them. Regardless of who is affected, in the context of Hand Surgery, patient care can be compromised.

The term *intersectionality* was first coined in 1989 by Kimberlé Crenshaw, a Professor of Law at Columbia University, and a distinguished Professor of Law at the University of California, Los Angeles.[16] Intersectionality is a concept that describes the exponential discrimination toward individuals who belong to more than 1 marginalized group, such as their racial and ethnic group and gender affiliation. These individuals are often the subjects of prejudice on a larger scale due to the existence of their multiple realities. For example, a black woman who is discriminated against for being black and for being a woman will suffer more discrimination and inequity than a Black man or White woman.[17]

DISCUSSION

Hand surgeons experience multiple types of interpersonal encounters across a variety of environments. These encounters include varying levels of power and authority and situations that capture biases and microaggressions. The patient-surgeon, surgeon-peer, surgeon-staff, and surgery training environment all afford their own unique sets of challenges when it comes to addressing biases in the workplace (**Table 2**).

Patient-Surgeon Relationship

Within the Hand Surgery clinical sphere, the patient-surgeon relationship is essential in diagnosis, surgical decision-making, overall care delivery, and complication prevention and mitigation. Multiple treatment options can be available based on the condition being treated. The development of trust between the patient and surgeon is crucial in finding the care plan best suited for the patient.

Socioeconomic status has been found to affect access to hand specialty care in the United States,[18] with less access to hand trauma and congenital hand care in underserved areas.[19,20] Large-scale studies of implicit bias in health care have found evidence of health care providers displaying bias that favors patients of upper socioeconomic status,[21] by surgeons and nurses[22,23]; this cultivates a system whereby hand surgeons at tertiary referral centers facilitate care for this population.

Race-related disparities in health care are also documented in patient counseling,[24] timing of operations,[25] and perception of pain and prescription of opioids.[26,27] Unsurprisingly, patients are more likely to choose racial- and ethnic-concordant physicians[28] and are also more likely to follow their physician's recommendations if they are of the same race and ethnicity.[29]

Table 1
Types of microaggressions

Type	Definition	Examples
Microassaults	Discriminatory action or comment that is intentionally performed/spoken; however, it may or may not have been meant to be offensive	• Using racial epithets • Telling homophobic jokes • Crossing the street and clutching their purse in the presence of individuals of low socioeconomic status
Microinsults	Unconscious verbal or nonverbal communications that convey subtle rudeness or insensitivity that demeans a person's identity	• Assuming a female is in a more junior role • Touching someone's hair without permission • Commenting on how articulate someone is given their race
Microinvalidations	Unconscious acts or words that negate, undermine, or nullify the feelings and reality of a marginalized person/group	• Mistaking a person for someone else of the same race • Stating a hurtful comment was not meant to be hurtful • Giving credit for work done by an individual with a disability to someone without a disability
Environmental Microaggressions	Systemic rules or physical environment that excludes, underpins vulnerability, and perpetuates inequity	• Lack of representation on governing bodies • Surgeons' lounge connected to male locker room, and staff lounge connected to female locker room • Naming buildings on a college campus after only White heterosexual upper class males

Implicit bias and microaggressions are multidirectional and often occur from the patient to the physician. These "contra-power" microaggressions can lead to burnout among physicians.[30] In addition, these biases are reflected in patient satisfaction scores. Metrics like these, such as Press-Ganey scores, often influence physician compensation and promotion, worsening the impact of disparities in academic medicine.[31]

Surgeon and Peers

Within the surgical community, implicit gender bias is well documented. Large cohort implicit association test (IAT) has found that among surgeons, men are associated with surgery and women with family medicine as specialties. Furthermore, cumulative implicit bias can have an impact on personnel hiring decision making. Downstream effects of such decisions are thought to contribute to underrepresentation and disparities in access to mentorship and leadership opportunities. Within Hand Surgery, documented downstream disparities in research,[32,33] society leadership,[34] and hand fellowship directorship[35] have been noted.

Surgeon and Staff

As a surgeon in the health care environment, one interacts with many types of staff as an integral part of the operating room team. A recent validated survey study found that surgeons' leadership behaviors affected intraoperative team performance, particularly negative behaviors.[36] Both in and out of the operating room, hand surgeons encounter administrative, nursing, technical, cleaning, and supply chain team members on a daily basis. Members of each of these groups have their own separate dynamics and propensity for biases.

Studies on operating room staff characteristics that were predictive of surgeons being written up have found that the likelihood of writing up the surgeon was predicted by role, with technologists, nurses, and assistants reporting surgeons at higher frequencies.[37]

Furthermore, the age/generation of operating room staff and how they interpreted surgeons'

Table 2
Summary of bias and clinical microaggression for the hand surgeon

Environments	Examples of Implicit Biases	Examples of Clinical Microaggression
Surgeon-patient	Disfavor for patients who make below the federal poverty line Preference for males	• Patients with incomes below federal poverty level being denied care because the provider knows they cannot pay • Patients being late due to taking multiple public transportations are labeled as "rude" for being late to appointments • Patient calling the male medical student "Doctor" and the female attending "Honey"
Surgeon-peer	Disfavor for Black community Preference for neurotypical	• A surgeon telling a peer "One of my good friends is black," to prove they are not biased • A surgeon with ADHD is ridiculed for never listening at faculty meetings
Surgeon-staff	Preference for White Preference for males Disfavor of homosexuality	• The OR nurse mistakes the new black female attending as a medical student • A male floor nurse says "no homo" after a gay surgeon compliments his haircut
Training environment	Disfavor for heterosexuality Preference for males Disfavor for Latino/a community	• A program director asks a homosexual male resident what his "wife thinks" of him working long hours • Latina medical student is asked "Are you sure you want to go into surgery?"

Abbreviations: ADHD, attention-deficit hyperactivity disorder; OR, operating room.

behavior has revealed that older generations were more likely to find behaviors of impatience, tardiness, and swearing to be inappropriate compared with younger generations who found fault with deviation from rules and regulations such as the surgical time out.[38]

The microaggression of mislabeling a physician from a marginalized group as someone who has less training (mistaking a female attending for a nurse, or a black resident as the janitorial staff) occurs frequently. However, the physician is faced with a dilemma because speaking up about the microaggression may be perceived as disrespect for the nonphysician staff and their profession.[30]

At the crux of these observations is the lack of insight into one's own biases. For instance, survey studies of nurses at an academic hospital found that whereas 71% of those surveyed believed they had no implicit bias, in actuality, only 14% displayed no implicit bias after taking an IAT regarding clinical vignette scenarios.[23]

Often, being the leader of their team during these times, hand surgeons must be aware of role-specific, generational, race, ethnicity, and socioeconomic biases and microaggressions.

Training Environment

The academic training environment has lent itself to several studies regarding the presence of both bias and microaggressions, providing insight into training programs within medical settings. Although most studies have unanimous themes, the frequency and consistency may provide evidence that biases are being encouraged and facilitated within our training programs.

Several recent reports have found disparities and bias manifesting in Hand Surgery letters of recommendations[39] and Orthopedic Surgery residency interviews.[40] A recent survey study of Plastic Surgery trainees found that 69% of trainees reported experiencing microaggressions within

the past year, with females, racial, and sexual minorities having higher odds of reporting such experiences.[41]

Furthermore, there is some consensus that as a trainee, the risk of reporting racial discrimination is not worth the reward of potential equity.[42] Hence, as leaders of a training program, surgical team, operating room, or administrative teams, one must be increasingly aware of how their actions may be interpreted.

Intersectionality has been shown to be relevant in the graduation rates of General Surgery residents. A study by Keshinro and colleagues[17] demonstrated that the increase in women graduates of General Surgery residencies is attributed in most part to the increase in White and Asian women, and not black and Latina women; this occurs despite an increasing number of black and Latina women applicants to General Surgery residency.[17]

Attrition of trainees from surgical training is more common in women and racial/ethnic minorities.[17,43,44] This attrition has been reported to be associated with burnout that is secondary to implicit bias and microaggressions.[45,46] The attrition of trainees with minority backgrounds perpetuates the deficiency of diversity among the ranks of practicing surgeons and is detrimental to patient care.

Action Plan

At an institutional level, many organizations are incorporating Diversity, Equity, and Inclusion committees or including curricula within medical education to prepare health care providers to be more aware and trained regarding implicit biases.[47] These organizations can be great resources to find and take an IAT, provide training for one's teams, and gain exposure through events and lectures. However, ultimate change must come at the individual level, and these are the efforts on which the authors focus, with strategies summarized in **Table 3**.

For those striving to work through strategies to reduce implicit biases and microagressions in the workplace, definitions and evidence of existing problems only help to some extent. Although there is no true way to eliminate implicit bias from our decision making, minimizing its negative impact on others is an achievable goal. Although awareness is the first step to solution, implementing change to reduce bias is often harder than it seems.

In psychology literature, it is well known that small changes in behavior can cumulatively bring about change. For example, it is encouraging to note research establishing that implicit bias is a habit that can be broken. Devine and colleagues[48]

Table 3
Strategies to combat implicit bias and microaggressions

Strategy Source	Explanation	Useful Link
Project Implicit[49]	Take an IAT	https://www.projectimplicit.net
APA's recommendations for the target, bystander, or microaggressor[50]	Target: • Consider the context • Take care of yourself • Don't be fooled by microaggressions packaged as opportunities ("Minority tax") Bystander: • Be an ally • Speak for yourself Microaggressor: • Try not to be defensive • Acknowledge the other person is hurt • Apologize and reflect	https://www.apa.org/monitor/2017/01/microaggressions
APA's Inclusive Language Guidelines[51]	Consciously avoid using language that may be perceived as a microaggression, regardless of the intent	https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines

Abbreviation: APA, American Psychological Association.

developed an intervention to reduce implicit bias and showed that it is possible to retain this gain over a 12-week period. The American Psychology Association has a concise outlined plan for the parties involved in any microaggression and is summarized in **Table 3**. The following section lists the action steps or behaviors that health care providers can practice to reduce the potential for displaying implicit bias and microaggressions.

CLINICS CARE POINTS

- Educate yourself and be aware of how your interactions are perceived by those you interact with as a surgeon (see **Tables 1** and **2**).
- Take an implicit bias test and be receptive to the results of the test[22] and critically think about your background and your own potential preferences (see **Table 3**).
- Ask patients "What's going on in your world right now and how is your hand problem affecting it?" instead of "How's your hand doing"?
- At the end of any encounter, ask patients if they feel comfortable instead of asking if they understand what you are saying.
- Offer a second opinion and be open to patients not wanting to seek care with you. Everybody is not for everybody.
- Facilitate a training session for team members and trainees.
  - Provide scenarios that do and do not depict implicit bias and ask respondents to react and differentiate between the 2 scenarios.
  - Provide scenarios of different types of implicit bias/microaggression and ask the respondent to select from options about how the target should respond.
  - Vary the scenarios so that the recipient of the bias/microaggression has more power or less power (eg, staff member on surgeon).
- Listen to others and explore why something was perceived as hurtful or demeaning, even if that was not the intention.
- Strive to use inclusive language to avoid conscious and unconscious microaggressions (see **Table 3**),

SUMMARY

The existence and detriment of implicit bias and microaggressions is becoming more and more recognized in medicine. Awareness of these psychological attacks is not enough to mitigate or stop them from occurring, or prevent the progression of their downstream effects. As hand surgeons, we can be leaders in our medical community and actively work to eliminate these learned but entrenched views of others. Resources are available to guide and support us through this process and spearhead a culture change within our subspecialized field of medicine.

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