Microaggressions During Medical Training

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University of California, Los Angeles
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Table. Composite Cardiovascular Disease According to Quartile of Calibrated 24-Hour Urinary Sodium Excretion[a]

Variable	No.	Hazard Ratio (95% CI) by Calibrated Urinary Sodium Excretion, mg/24 h[b]				*P* Value for Linear Trend
		<2894	2894-3649	3650-4547	≥4548	
Multivariable-adjusted model[c]	3528	1 [Reference]	0.87 (0.69-1.10)	1.01 (0.81-1.26)	1.36 (1.09-1.70)	<.001
P value			.24	.96	.007	
Multivariable-adjusted model plus 24-h urinary potassium excretion	3436	1 [Reference]	0.83 (0.66-1.05)	0.97 (0.77-1.21)	1.29 (1.02-1.62)	.003
P value			.12	.77	.03	
Multivariable-adjusted model plus 24-h urinary protein excretion	3511	1 [Reference]	0.88 (0.70-1.10)	1.02 (0.82-1.28)	1.31 (1.05-1.64)	.002
P value			.26	.85	.02	
Multivariable-adjusted model plus 24-h urinary albumin excretion	3299	1 [Reference]	0.81 (0.64-1.03)	0.94 (0.75-1.18)	1.29 (1.03-1.63)	.002
P value			.09	.59	.03	

[a] Composite cardiovascular disease includes myocardial infarction, heart failure, and stroke.

[b] Calibrated to mean urinary creatinine excretion of 1569 mg/24 hours in men and 1130 mg/24 hours in women.

[c] Adjusted for age; sex; race/ethnicity; clinic site; education; waist circumference; lean body mass index; body mass index; cigarette smoking; alcohol drinking; physical activity; low-density lipoprotein cholesterol level; glucose level; history of cardiovascular disease; use of antidiabetic medications, lipid-lowering medications, diuretics, renin-angiotensin system blocking agents, and other antihypertensive medications; urinary creatinine excretion; and baseline estimated glomerular filtration rate.

Unlike the findings from the study by O'Donnell and colleagues,[2] restricted cubic spline analyses of the association between sodium excretion and composite CVD provided no evidence of a nonlinear association ($P = .11$) and indicated a significant linear association ($P < .001$) in our study. O'Donnell and colleagues used only 1 morning spot sample to calculate 24-hour urinary sodium excretion, which is subject to bias due to day-to-day variations in sodium intake and systemic differences between morning spot samples and 24-hour samples in sodium excretion among populations with various levels of sodium intake.[3] In our study, up to three 24-hour urine samples were obtained, which provided more accurate measurements of usual sodium intake at the individual level.

Dr Almirall is concerned about the potential confounding effect of kidney function and proteinuria among patients with CKD. In multivariable models, we adjusted for baseline estimated glomerular filtration rate. Furthermore, we additionally adjusted for 24-hour urinary protein and albumin excretion (Table). The positive and linear association between urinary sodium excretion and risk of CVD remained after these adjustments. These analyses confirmed that higher urinary sodium excretion was associated with increased risk of CVD among patients with CKD.

Katherine Mills, PhD, MSPH
Jiang He, MD, PhD

Author Affiliations: Department of Epidemiology, Tulane University School of Public Health and Tropical Medicine, New Orleans, Louisiana.

Corresponding Author: Jiang He, MD, PhD, Department of Epidemiology, Tulane University School of Public Health and Tropical Medicine, 1440 Canal St, Ste 2000, New Orleans, LA 70112 (jhe@tulane.edu).

Conflict of Interest Disclosures: All authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none were reported.

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Microaggressions During Medical Training

To the Editor Dr Montenegro described the insidious climate of microaggressions that often negatively shapes the experiences of underrepresented physicians during medical school, residency training, and clinical practice.[1]

During medical education and training, underrepresented physicians attain clinical knowledge but often must prove to colleagues, and sometimes to themselves, that they belong.[2] The number of studies on the importance of resilience and its role in overcoming difficult life events is rapidly expanding. Yet resilience places the onus entirely on the individual who is struggling to find inner strength and resources for success, essentially absolving the culture and social context that creates toxic stress. Medical schools and teaching centers should equip faculty and students with self-awareness of the potential untoward effects imparted by unconscious bias and microaggressions in all aspects of health care.

Little guidance on how to deal with microaggressions or overt examples of racism is provided to medical trainees or practicing physicians.[3] Furthering training that deals with microaggressions and unconscious bias in partnership with communities needs to become an active component of predoctoral and graduate medical education. Helping future physicians understand that unconscious bias and microaggressions may affect their ability to provide equitable and appropriate care should be as important as learning the

Krebs cycle. Some medical schools are actively revamping curricula to better identify, understand, and lessen microaggressions through didactics and small-group learning modules. How these curricula affect the training of physicians will be important to explore.

Jesus G. Ulloa, MD, MBA
Efrain Talamantes, MD, MBA, MSHPM
Gerardo Moreno, MD, MSHS

Author Affiliations: Department of Surgery, University of California-San Francisco, San Francisco (Ulloa); Division of General Internal Medicine, University of California-Davis School of Medicine, Sacramento (Talamantes); Department of Family Medicine, David Geffen School of Medicine, University of California-Los Angeles, Los Angeles (Moreno).

Corresponding Author: Jesus G. Ulloa, MD, MBA, Department of Surgery, University of California-San Francisco, 513 Parnassus Ave, S-321, San Francisco, CA 94143-0658 (jesus.ulloa@ucsf.edu).

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In Reply Dr Ulloa and colleagues comment on the importance of furthering training that deals with microaggressions and unconscious bias at the individual, institutional, and community level. Teaching about power, privilege, and microaggressions can be daunting for most educators—there is little guidance on how to effectively teach these complicated topics and the educators are often met with great resistance.[1]

Over the past 2 years, psychiatry residents who are part of the American Psychiatric Association's Minority Fellows Program have developed an interactive symposium on microaggressions. The panelists share personal narratives on microaggressions as underrepresented (race, sex, religion, international medical graduate, sexual orientation, etc) trainees and young faculty members. At these symposiums, the presentation of narratives led to less resistance and more audience participation. Thus, one of the goals for the A Piece of My Mind article was to provide a narrative that would humanize the unique experiences of underrepresented physicians and in turn lessen the resistance to this topic.

In teaching about these concepts, it is important to emphasize that microaggressions are not about having hurt feelings. Rather, it is about the negative effect that being repeatedly insulted, invalidated, alienated, and dismissed have at both a micro (biological) and macro (social) level. Individually, these incidents may seem innocent or benign. Cumulatively, however, microaggressions act like microtraumas, and I agree with Ulloa and colleagues that placing the onus entirely on the recipient absolves "the culture and social context that creates toxic stress."

As Ulloa and colleagues note, many institutions have begun to develop microaggressions training curricula that target trainees and faculty. The American Psychiatric Association, for instance, will soon be releasing an online module on microaggressions and bias. In addition to furthering training on microaggressions within medical institutions, more extensive and collaborative research on this topic is urgently needed. More curricula research and centralized dissemination would help optimize teaching of the skills needed to deal with both overt and more covert forms of microaggressions. More biomedical research on microaggressions is also necessary. Although it is well established that perceived discrimination has harmful consequences, how microaggressions and other discrimination gets "under the skin" and affects mental and physical health needs to be understood.[2] A project designed to prospectively follow physicians in training to determine the biological effects of microaggressions and other stressors is under way, but much more investigation remains to be conducted.[3]

Roberto Montenegro, MD, PhD

Author Affiliation: Division of Child and Adolescent Psychiatry, Seattle Children's Hospital, Seattle, Washington.

Corresponding Author: Roberto Montenegro, MD, PhD, Division of Child and Adolescent Psychiatry, Seattle Children's Hospital and University of Washington School of Medicine, 4800 Sand Point Way NE, Seattle, WA 98105 (roberto.montenegro@seattlechildrens.org).

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Evaluating Elevated Hemoglobin

To the Editor In a *JAMA* Diagnostic Test Interpretation article, Drs Scherber and Mesa outlined the diagnostic steps in evaluation of an elevated hemoglobin level.[1] We agree that *JAK2* V617F gene mutation testing is among the options in the diagnostic algorithm for elevated hemoglobin, even in the presence of low-normal serum erythropoietin levels, because prompt treatment of polycythemia vera is warranted to reduce thrombotic risk. Contrary to the authors' statements, however, testing for *JAK2* mutations is usually done on peripheral blood rather than plasma, and test results are typically reported as either positive or negative (qualitative). Quantitative values are difficult to interpret because there is no standard analytic method of measurement and there are no interlaboratory calibrators. Numeric thresholds for acting on mutant allele burden are not well established.