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The Impact of Increasing Skin of Color Representation in the Pre-Clerkship Dermatology Curriculum

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To the Editor:

The lack of representation of skin of color (SOC) in medical school dermatology curricula has been widely documented.[1] At Loma Linda University School of Medicine, the curriculum for the class of 2024 (CO24) was restructured by incorporating images from a wide range of skin tones and by adding lectures given by a dermatologist specializing in SOC.The classes of 2025 and 2026 (CO25, CO26) received the restructured curriculum. This study evaluates the impact of these curricular changes on students' diagnostic accuracy, perception, and confidence in treating dermatologic conditions in diverse populations.

The anonymous survey included 25 questions: 3 questions about demographics, 11 questions about the representation of SOC in the curriculum and personal confidence in treating SOC patients using a five-point Likert scale, 10 quiz questions involving photographs of common dermatologic conditions, and one free-response question to identify areas for improvement. All dermatology lecture presentations were analyzed by researchers (DK, LH, and AS), and photographs of skin were classified as light-skinned (Fitzpatrick skin types [FST] I-III) or SOC (FST IV-VI). A total of 124 students completed the survey (N = 124/539; 23% response rate). Lecture images were composed of 23% and 16% of SOC and 74% and 81% of light skin for CO25/26 and CO24, respectively, with no significant differences. However, CO25/26 reported that the curriculum was more diverse compared to CO24 (P<0.001), and CO25/26 were less likely to think that more representation of SOC was needed (P<0.001; Table 1). Similarly, while both groups called for more SOC representation, many CO25/26 respondents commended the diversity of the added lectures and expressed satisfaction. CO25/26 scored higher on conditions presented on SOC than CO24 (P=0.02), but both classes did worse on photographs of SOC compared to light–skinned (P<0.001; Table 2). No relationships were found between diagnostic accuracy and perceptions of the importance of SOC representation, the impact of SOC representation, and confidence in making the correct diagnosis.

There are numerous reports of improved self-rated confidence and diagnostic accuracy regarding SOC after educational interventions.[2] To our knowledge, this is the first study to assess the impact of curriculum change on students' confidence and on their diagnostic accuracy while also investigating their perceptions of the importance of SOC representation. Although all students endorsed proper SOC representation as important and impactful, their diagnostic abilities differed; these results suggest that students' diagnostic performance depends more on the educational material than on their own beliefs. At this stage of medical education, learning primarily happens through direct transfer of information from professors to students, so it is paramount that professors judiciously analyze their lectures

TABLE 1.

Perception Results			
Question	Median rating 1 (least) – 5 (most)		*P* value
	CO24	CO25/26	
Thought the curriculum was diverse	2.0	3.0	<0.001
Thought the curriculum needed more representation of SOC[a]	3.0-4.0	2.0-3.0	<0.001
Importance of representation of diverse skin	5	4.0	0.1
Impact of representation of SOC on the ability to provide adequate care for future patients of color	4.0	4.0	0.7
Confidence in making correct diagnosis in patients of color	2.0	2.4	0.5
Confidence in making correct diagnosis in patients with lighter skin	3.0	3.0	0.1

[a]Skin of Color

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TABLE 2.

Quiz Results	Average score		*P* value
	CO24	CO25/26	
Diagnostic accuracy for SOC images	54%	64%	0.02
Diagnostic accuracy for light-skin images	80%	77%	0.4
P value	<0.001	<0.001	--

to prevent unintentional transmission of bias. Limitations of this study include low response rates, overrepresentation of White individuals in CO24, and self-selection bias, but the number of participants in each group and the demographics of CO25/26 were not different from the school population.

DISCLOSURES

The authors have no conflicts of interest to disclose.

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