

Skin Tone Representation in Dermatology Textbooks: Approximating the Gap

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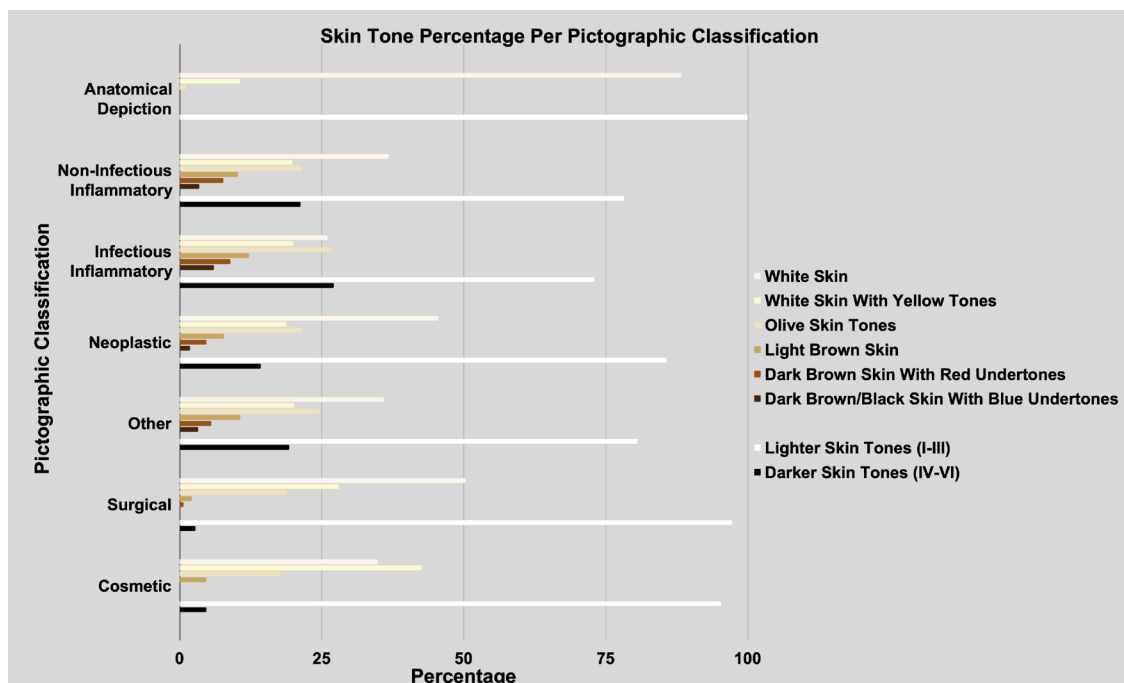
INTRODUCTION

Dermatology heavily relies on photographs in its literature to depict diseases and demonstrate treatment modalities. Previous studies have established that general medical and dermatology textbooks have limited photographic representation of individuals with skin of color (SOC), even those diseases highly prevalent in these populations.^{1,2} As the US population continues to grow and diversify, there is an increase in individuals with SOC seeking cosmetic and procedural services.³ We set out to investigate the current trends of SOC representation in the surgical and cosmetic sections of current dermatology textbooks.

The latest editions of three dermatologic textbooks, *Dermatology 4th Edition*, *Andrews' Diseases of the Skin: Clinical Dermatology 13th Edition*, and its corresponding *Clinical Atlas*, were assessed

to find the skin tones represented in each photograph or anatomical schematic, with a particular focus on the surgical and cosmetic sections. The photographs of varying skin tones were assigned a numerical value on a scale of I to VI with the following variables: I as white skin; II as white with yellow tones; III as olive skin tones; IV as light brown; V as dark brown with red undertones; and VI as dark brown/black with blue undertones. The percentage of each skin tone depicted was calculated per diagnostic or procedural category. The images represented among the three dermatology textbooks were 79.9% skin tones I-III and 20.1% skin tones IV-VI. Similar outcomes were found when evaluating the procedural categories. Skin tones I-III represented 97.2% of surgical images and 95.3% of cosmetic images. 100% of anatomical schematics were represented as skin tones I-III (Figure 1).

FIGURE 1. Skin tone representation in pictures and anatomic schematics among three major dermatology textbooks.



The underrepresentation of darker skin tones highlights the lack of patient diversity in the surgical and cosmetic chapters. Our findings were similar to those who previously evaluated general dermatology textbooks and SOC representation.^{2,4} As skin cancer is more prevalent in people with lighter skin tones, and the bulk of dermatologic surgery is aimed at the treatment of skin cancer; the natural tendency is to overrepresent lighter tones in the depiction of those procedures.⁵ However, dermatologists need to be able to treat surgical skin conditions regardless of the patient's skin color, so it is imperative to have a broad range of skin types published in educational literature utilized by students, trainees, and physicians. A lack of skin tones IV-VI in education may perpetuate gaps in proficiency, maintain disparities, and create implicit biases.³

Dermatologic training should expose physicians to a spectrum of skin tones to enhance comfort and proficiency in diagnosing and surgically treating skin conditions equally in all patients. The field of dermatology has a responsibility to eliminate these discrepancies by using photographs and anatomical schematics in our textbooks and atlases that incorporate patients with SOC.

DISCLOSURES

The authors have no conflicts of interest to declare.

REFERENCES

1. Ebade T, Papier A. Disparities in dermatology educational resources. *J Am Acad Dermatol*. 2006;55(4):687-690. doi:10.1016/j.jaad.2005.10.068.
2. Adekun A, Onyekaba G, Lipoff JB. Skin color in dermatology textbooks: an updated evaluation and analysis. *J Am Acad Dermatol*. 2021;84(1):194-6.
3. Julius Few MD, Callender BV, Boyd EC. Myths and knowledge gaps in the aesthetic treatment of patients with skin of color. *J Drugs Dermatol*. 2019;18(7):616-22.
4. Lester JC, Taylor SC, Chren MM. Under-representation of skin of colour in dermatology images: not just an educational issue. *Br J Dermatol*. 2019;180(6):1521-2.
5. Louie P, Wilkes R. Representations of race and skin tone in medical textbook imagery. *Soc Sci Med*. 2018;202:38-42.

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