Reducing Health Disparities in Skin of Color Patients: An Educational Quality Improvement

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INTRODUCTION

Medical Education in Dermatology could benefit from a "Skin of Color" module to educate future physicians on diagnosing skin diseases of darker skin tones. Darker skin tones may have different presentation of diseases which future physicians are not well equipped to handle. African Americans have higher morbidity in many skin pathologies from eczema to skin carcinoma. In order to pilot such changes we proposed creating this module to begin the process of enabling future providers to approach the diverse dermatological patient. **The purpose of this study was to demonstrate the need for inclusivity in Dermatology curriculums to reduce health disparities in skin of color patients.**

METHODS

An optional "Skin of Color Module" was made available to 295 second year medical students during the Musculoskeletal/ Dermatology/ Peripheral Nervous System course. The module consisted of 13 cases with images of various , rashes, infections, and skin cancers in darker skin tones. See Figure 1 for sample images. A pre-survey and post-survey were used to evaluate confidence before and after the module was completed. Data was collected via an anonymous login ID for each student. 145 students began the pre-survey, **77 (53%)** students completed the pre-survey, module, and post-survey. Confidence was scaled from 1-5 on a Likert scale, 1 being least confident and 5 being most confident. A mixed method design was used. A paired t-test was used to identify if significant change in confidence occurred following completion of the module.

Figure 1: Sample images from the module: (a) Discoid Lupus Erythematosus, (b) Basal Cell Carcinoma, (c) Acral Lentiginous Melanoma

RESULTS

Likert Confidence Average

	Q1	Q2	Q3	Q4
Pre-Survey Confidence	1.97	2.03	2.16	2.13
Post-Survey Confidence	3.06*	2.84*	2.96*	3.08*
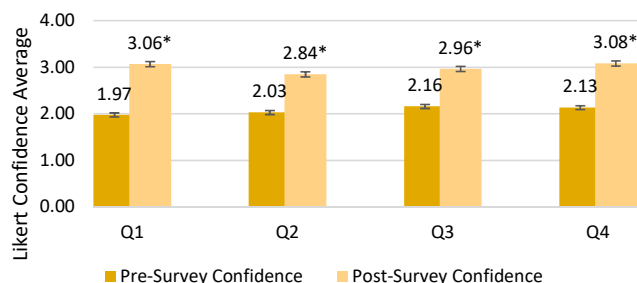
❖ **With this module a statistically significant improvement in confidence amongst the four measured parameters.**

❖ **Q1:** What is your confidence level in diagnosing skin infections in African Americans? P value = 0.00000000000000000011

❖ **Q2:** What is your confidence level in diagnosing skin cancer in African Americans? P value = 0.0000000000035

❖ **Q3:** What is your confidence level in recognizing differences in morbidity and mortality of dermatological conditions in African Americans? P value= 0.0000000000010

❖ **Q4:** What is your confidence in approaching skin diseases in a variety of skin tones? P value = 0.00000000000000020

❖ A p value <0.05 was deemed significant.

STUDENT FEEDBACK

❖ " I think the module was very helpful by providing many examples of skin lesion differences in POC. I would like this sort of thing to be implemented in lectures."

❖ "Focus more on the descriptions of the rashes/lesions and how they differ from white people."

❖ "Provide different ethnicities photos for all of the diagnosis. This would make the module much longer, but then would really show how different skin conditions look on every different skin tone. "

❖ "More straight identifications from pictures"

CONCLUSION

v Students were overall satisfied with the module and found it to be helpful in their dermatology education.

v Post-module completion demonstrated a significant increase in confidence for diagnosing skin infections and skin cancer in African Americans, recognizing morbidity and mortality disparities in African Americans, and confidence in approaching skin diseases in skin of color.

v Medical education lacks adequate representation in skin of color. Supplementary instruction and emphasis on skin diseases in skin of color is crucial to competently serving skin of color patients.

v *Moving forward*, we hope to incorporate this module into the Dermatology curriculum for second year students. Following feedback from students, we are planning to include images of skin diseases from other minority ethnicities and include comparison images to Caucasian skin types.

v We hope that other medical schools can use this module as an example to increase inclusivity in Dermatology curriculums to reduce health disparities in skin of color patients by ensuring medical students are properly trained to treat patients of darker skin tones.

Bibliography

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