
Sun-protective behaviors in patients with cutaneous hyperpigmentation: A cross-sectional study



Mayra B. C. Maymone, MD, DSc,^a Hind H. Neamah, MD, MPH,^b Stephen A. Wirya, MD, MSc,^a Nicole M. Patzelt, BA,^a Pedro Q. Zancanaro, MD,^a and Neelam A. Vashi, MD^a
Boston, Massachusetts

Background: Disorders of hyperpigmentation are seen commonly in clinical practice. Despite numerous studies investigating sun-protective habits among healthy persons, little is known about these behaviors within patient populations with hyperpigmentation disorders.

Objective: We sought to examine photo-protective behaviors and their associations in individuals with disorders of hyperpigmentation.

Methods: This cross-sectional study was conducted with 404 adults who complained of cutaneous hyperpigmentation.

Results: About 67.5% reported using a product containing sunscreen, and 91% endorsed using one with a sun protection factor of 21 or higher. Among the participants, 48.5% were not sure if their sunscreen provided broad-spectrum protection, and only 7.6% reapplied every 2 hours. The odds of a patient with melasma using sunscreen were 6.7 times the odds of a patient with postinflammatory hyperpigmentation using sunscreen ($P < .001$). Additional predictors for sunscreen use were female sex (OR = 3.8, $P = .0004$) and disease duration of ≥ 1 year (OR = 2.1, $P = .003$). In a multivariate analysis, the odds ratio of sunscreen use among African Americans compared to whites was 0.31 ($P = .008$).

Limitations: Limitations included recall bias, question misinterpretation, and reporter bias.

Conclusion: Patients diagnosed with postinflammatory hyperpigmentation, men, and those with disease duration < 1 year reported lower sunscreen usage. These groups might benefit from increased counseling on sun-protective behaviors. (J Am Acad Dermatol 2017;76:841-6.)

Key words: broad spectrum; cutaneous hyperpigmentation; darker skin; melasma; postinflammatory hyperpigmentation; sun-protective behaviors; sun protection factor; sunscreen.

Photo-protective behaviors reduce the risk for skin cancer, prevent skin aging, and, additionally, are important adjuvant treatments for photo-exacerbated disorders.¹⁻³ Numerous studies have been conducted investigating the sun-protective habits of healthy individuals,⁴ patients with skin cancer,⁵ outdoor workers,⁶ and those who frequently engage in outdoor recreational activities⁷; however, little is known about the sun-protective

Abbreviations used:

PIH: postinflammatory hyperpigmentation
SPF: sun protection factor

behaviors of patients with disorders of hyperpigmentation. Although often benign conditions, they can cause deleterious emotional and psychological

From the Department of Dermatology, Boston University School of Medicine, Boston^a and Department of Global Health and Social Medicine, Harvard Medical School, Boston.^b

Funding sources: Supported by the Boston University Department of Dermatology.

Conflicts of interest: None declared.

Accepted for publication December 8, 2016.

Correspondence to: Neelam A. Vashi, MD, Boston University School of Medicine, 609 Albany St, J602, Boston, MA 02118.
E-mail: nvashi@bu.edu.

Published online February 15, 2017.

0190-9622/\$36.00

© 2016 by the American Academy of Dermatology, Inc.

<http://dx.doi.org/10.1016/j.jaad.2016.12.018>

impact and have been reported to be among the top 5 reasons African Americans visit a dermatologist,⁸ one of the top 10 diagnoses among Latino patients,⁹ and 11th among the top 20 conditions seen by dermatologists.¹⁰

By the year 2042, nearly half of the US population will be composed of nonwhites.¹¹ As a result, the prevalence of and interest in the prevention and treatment of hyperpigmentation disorders is expected to increase as those with darker skin types are more susceptible to these disorders. We sought to examine the use of photo-protective behaviors and their association with demographic and clinical factors among individuals with cutaneous disorders of hyperpigmentation.

METHODS

This cross-sectional study was conducted on 404 adults with cosmetically bothersome cutaneous hyperpigmentation who sought dermatological care at Boston Medical Center or East Boston Neighborhood Health Center from February of 2015 to July of 2016. This study was approved by the Boston University Institutional Review Board. Of the 424 invited to take part in the survey, 20 declined to participate, giving a response rate of 95%. Information for the study was collected in 2 parts: an anonymous paper-based survey in participants' preferred language (English, Spanish, or Portuguese) and a clinical evaluation in which diagnosis and skin type were determined by a trained dermatologist. Those younger than 18 years of age, who were not proficient in English, Spanish, or Portuguese, and who were unable to complete the questionnaire were excluded. The survey contained questions pertaining to demographics, sunscreen use, sun protection factor (SPF) use, and sun-protective measures, including seeking shade and wearing hats. To examine sunscreen use and sun-protective behaviors, participants were asked, "Are you currently using a lotion, cream, or sunscreen with sun protection factor (SPF)? [yes, no, don't know]." Participants who answered yes continued to answer the following questions: "What sun protection factor (SPF) are you using? [10-20, 21-50, 51-100, >100, or don't know]," "How often do you re-apply sunscreen? [every 2 hours, 3x day, 2x day, 1x day, occasionally, or almost never]," and "Is your

sunscreen broad spectrum? [yes, no, don't know]." This was followed by questions regarding other photo-protective habits: "On average, how many hours are you in the sun between 10 am to 4 pm? Weekends: [1 or less, 2, 3, 4, 5, 6] and Weekdays: [1 or less, 2, 3, 4, 5, 6]" and "When you are outdoors in the sun, how often do you do each of the following?"

Wear a hat: [rarely or never, sometimes, usually, always], Stay in the shade or under an umbrella: [rarely or never, sometimes, usually, always]."

Data analysis

Collected data was managed using Research Electronic Data Capture. Statistical analyses were performed using STATA/SE 13.0. Descriptive characteristics were studied by 3 diagnostic categories (melasma, postinflammatory hyperpigmentation (PIH), or other diagnosis of hyperpigmentation) depending on the clinical

diagnosis patients received during the clinical evaluation. The chi-square test was used to find any statistically significant differences between groups ($P < .05$).

For sample size estimation, a power analysis was performed, with the current sample being powered to detect as small as a 0.15 difference in proportions at 90% power ($P = .05$). Bivariate and multivariate logistic regression analyses were created to examine the relationship between sunscreen use and race.

Models were controlled for the following potential confounding factors: sex, age (>45 or ≤45), level of education (high school diploma or less or college/graduate degree), visit type (first or follow up visit), disease duration (from the time the patient first developed skin hyperpigmentation to 12 months or less, >12 months to 5 years, or more than 5 years), and clinical diagnosis (melasma, PIH, or other hyperpigmentation diagnoses).

Two logistic regression models were created. Model I was adjusted for sex, age, level of education, duration of the disease, and visit type. Model II was adjusted for clinical diagnosis in addition to the confounders in model I.

RESULTS

With a response rate of 95%, a total of 404 participants completed the survey. Of the participants, 89.1% were women, 47.5% were Hispanic or

CAPSULE SUMMARY

- Sun protection is an important adjuvant treatment for hyperpigmentation disorders.
- Among patients with hyperpigmentation, 67.5% reported using a product containing sunscreen. Individuals with postinflammatory hyperpigmentation, men, and those with disease duration <1 year reported lower sunscreen usage.
- Patients with hyperpigmentation might benefit from increased counseling on sun-protective measures.

Download English Version:

<https://daneshyari.com/en/article/5647990>

Download Persian Version:

<https://daneshyari.com/article/5647990>

[Daneshyari.com](https://daneshyari.com)