

# Factors Influencing Patient Selection of Sunscreen

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## ABSTRACT

Sunscreen is an essential component of sun protection. The most important characteristics for patient selection of sunscreens have not been evaluated. A cross-sectional survey study was performed at an academic dermatology office. The sunscreen characteristic chosen most frequently was SPF (75.2%). Fewer patients selected broad-spectrum (20.7%) and water-resistance (22.7%). There remains a gap in patient knowledge regarding AAD recommendations for sunscreen characteristics and educational initiatives may be required.

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## INTRODUCTION

Sunscreen is an essential element for sun protection and reduces the risk of skin cancer.<sup>1,2</sup> The American Academy of Dermatology (AAD) recommends sunscreen use for all ages.<sup>3</sup> There are a variety of sunscreen types (organic, inorganic) and formulations (creams, gels, sprays, sticks, etc.) and selection is an individualistic choice.<sup>3</sup> Dermatologists' sunscreen perceptions and recommendation factors have been previously studied.<sup>4</sup> However, the most important characteristics for patient selection of sunscreens have not been evaluated.

## MATERIALS AND METHODS

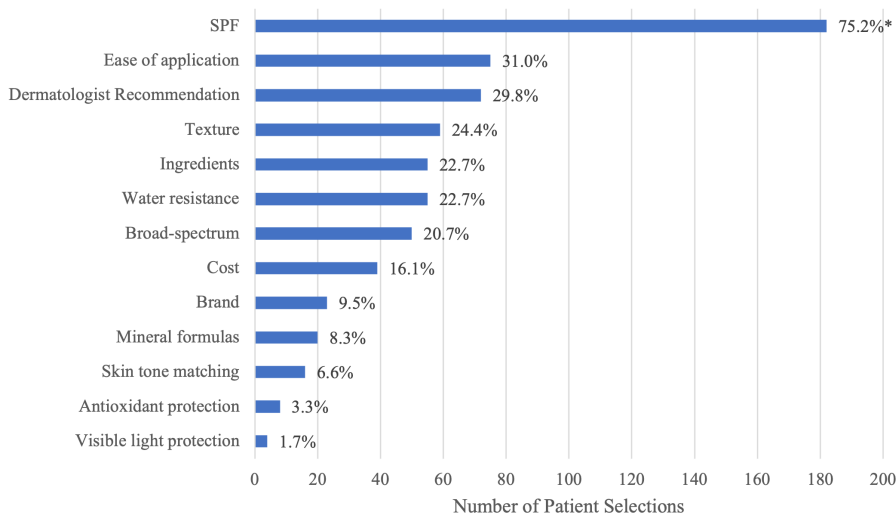
A cross-sectional survey study was performed at an academic dermatology office between November 1<sup>st</sup> and 10<sup>th</sup>, 2023. The survey was voluntary and offered to all patients >18 years.

This study was exempted by the institutional review board. Respondents were asked to circle the three most important characteristics (out of 13 listed) they use to choose sunscreen (Figure 1).

## RESULTS

A total of 242 patients completed the survey, 106 (43.8%) were males and 136 (56.2%) were females. The average age was 53.6 years. Survey results are depicted in Figure 1. The characteristic chosen most frequently was SPF (75.2%), which was statistically higher than all others combined ( $P<0.001$ ). Ease of application and dermatologist recommendation had similar preference rates (31.0% and 29.8%, respectively). Texture, water resistance, ingredients, and broad-spectrum were selected slightly less

**FIGURE 1.** Patient preferences for sunscreen characteristics.



\*Statistically higher than all other sunscreen characteristics combined ( $P<0.001$ ).

frequently (24.4%, 22.7%, 22.7%, and 20.7%, respectively). Fewer patients chose characteristics such as cost, brand, mineral formulas, and skin tone matching (16.1%, 9.5%, 8.3%, and 6.6%, respectively). Antioxidant properties and visible light protection were the least important characteristics for patients selecting sunscreen (3.3% and 1.7%, respectively). The five least preferred characteristics were statistically lower than all others combined ( $P < 0.001$ ).

## DISCUSSION

The most important characteristic for patients when selecting sunscreen was SPF. While features of sunscreen such as branding, antioxidant properties, and mineral formulas are commonly advertised, we found these characteristics are not as important for patients as clinical efficacy and cosmetic feel.

There is limited data on factors influencing patient selection of sunscreen. A prior study of the most popular online sunscreen purchases found that consumers preferred lotions as formulation.<sup>5</sup> In addition, sunscreens claiming to “decrease the risk of skin cancer and early aging” were found to significantly influence sales.<sup>5</sup> Per the AAD, the most effective sunscreen is the one that patients will use consistently.<sup>3</sup> Recommended features are SPF >30, broad-spectrum protection, and water-resistance.<sup>3</sup> While SPF was the most significant criterion for >75% of patients in our study, fewer selected broad-spectrum (20.7%) and water-resistance (22.7%). A prior study also found that only 50% of patients correctly answered questions regarding AAD sunscreen recommendations.<sup>6</sup>

Recent studies have described the importance of visible light protection, especially in skin of color patients.<sup>7</sup> Visible light can generate reactive oxygen and nitrogen species and contribute to skin damage and pigmentation.<sup>7</sup> As this characteristic was the lowest selected by patients (1.7%), it is important for this message to be delivered to patients. The results of this study demonstrate that a gap in patient understanding may be present, and initiatives may be implemented to improve patient education, especially in patients with darker skin tones.

Out of all physicians, dermatologists spend the most time discussing sunscreen with patients compared to other physicians.<sup>8</sup> A survey of dermatologists found that the majority used criteria of SPF level (99%), broad-spectrum (96%), and cosmetic feel (71%) for recommendation of sunscreens.<sup>9</sup> Our data demonstrates that dermatologist recommendation is an important factor for patient sunscreen selection, and therefore it is important for clinicians to continue to counsel patients on sunscreen selection.

## CONCLUSION

Recognizing the factors influencing patient selection of sunscreen is vital for dermatologists to enhance usage. This study found that SPF level is the most important sunscreen characteristic for patients. Other elements such as cosmetic feel and dermatologist recommendations are also critical. There remains a gap in patient knowledge regarding AAD recommendations for sunscreen characteristics and educational initiatives may be required, particularly in recognizing the need for visible light protection.

## DISCLOSURES

The authors have no conflicts to disclose.

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