

RESEARCH LETTER

Prevalence of Sun-Protective Behaviors Among Medical Students: Insights from a Survey at the University of Texas Medical Branch

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ABSTRACT

Introduction: Skin cancer encompasses almost half of the cancers diagnosed in the United States and the majority are caused by excessive sun exposure. Studies have found minimal sunscreen use among medical students and physicians despite understanding the importance of its use. This survey aims to evaluate the prevalence of sun-protective behaviors among the University of Texas Medical Branch (UTMB) medical students.

Methods: An anonymous survey assessed participants' demographic information, use of sun-protective measures, and weekly sun exposure from currently enrolled UTMB medical students.

Results: Out of the 920 medical students currently enrolled at UTMB, surveys were completed by 171 medical students, 18.6% of the student population. Regarding sunscreen use, 119 students (69.6%) regularly apply sunscreen, and of those students, 68.9% apply sunscreen daily. The most common sunscreens used were between SPF 20-60, however, most respondents did not reapply sunscreen (63.9%). Most participants were outside for one-three hours without shade covering (59.6%), did not wear protective clothing (65.5%), and did not get sunburned in the previous week (97.1%).

Discussion: Our results demonstrate increased sunscreen use among medical students compared to previously reported literature, however, most students did not wear sun-protective clothing or reapply sunscreen. Proper sun safety education in medical school has been shown to increase the likelihood of future sun-safety-related patient counseling. Addressing skin-protective measures in medical school can decrease the risk of skin cancer among medical students and their future patients. Future interventions can aim to educate medical students on sun safety.

INTRODUCTION

Skin cancer encompasses almost half of the cancers diagnosed in the United States and the majority are caused by excessive sun exposure.¹ Obtaining five or more sunburns doubles the lifetime risk of developing melanoma.¹ The regular use of sunscreen

and other sun-protective factors can reduce UV radiation exposure and skin cancer risk. In addition, community-based interventions like sun-safety presentations have been shown to increase awareness of skin cancer risk and willingness to participate in sun-protective practices.² However, studies have found minimal sunscreen use among medical students and physicians despite

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understanding the importance of its use^{3,4,5}. This survey aims to evaluate the prevalence of sun-protective behaviors among the University of Texas Medical Branch (UTMB) medical students, aiming to improve awareness of skin cancer and use of sun-protective behaviors to decrease their risk of skin cancer.

METHODS

After institutional review board approval was obtained, an anonymous Microsoft Form survey was emailed to all currently enrolled UTMB medical students. Participation was voluntary, and informed consent was provided. Survey questions assessed participants' demographic information, use of sun-protective measures (ex: sunscreen, protective clothing, etc.), and weekly sun exposure. Of the 920 medical students currently enrolled at UTMB, surveys were completed by 171 medical students, 18.6% of the student population. Using a significance level of 0.05, the power of this study is 1.0, signifying sufficient response to reflect the UTMB medical student body.

RESULTS

Respondents included 61 first-year students (26.5% of the class), 43 second-years (18.7%), 38 third-years (16.5%), 27 fourth-years (11.7%), and two students in a research year (**Figure 1**). The majority of participants included 112 females (65.5%), 85 White/Caucasians (49.7%), and 59 Asians (34.5%). Regarding sunscreen use, 119 students (69.6%) regularly applied sunscreen, and of those students, 68.9% applied sunscreen daily (**Figure 2**). The most common sunscreens used were between SPF 20-60 and typically applied to the face (98.3%), however, most respondents did not

reapply sunscreen (63.9%) (**Figure 2**). Most participants were outside for one-three hours without shade covering (59.6%), did not wear protective clothing (65.5%), and did not get sunburned in the previous week (97.1%) (**Figure 2**). Common weather conditions in which students did not apply sunscreen included overcast, rain, fog, and snow.

DISCUSSION

Our results show that most UTMB medical students are consistently applying sunscreen, however, most students do not wear sun-protective clothing or reapply sunscreen. Even though respondents were outside without shade covering for multiple hours, they likely did not receive a sunburn due to sunscreen use. Improvement in sunscreen reapplication and protective clothing usage would be beneficial to this community to prevent excessive UV radiation exposure. Our results suggest increased sunscreen use among medical students compared to previously reported literature, highlighting the potential for medical education to positively influence sun-protective behavior. As future healthcare providers, medical students can model and advocate for healthy practices.

Limitations include lack of an objective sun safety measure, which may lead to recall bias in self-reported behaviors. Additionally, participants were from a single geographic area, and UTMB's island location could account for the greater adherence to sunscreen use compared to other medical schools.

Preventative healthcare is integrated throughout medicine and should include sun safety. One study found that primary care physicians did not discuss sun safety because of "not thinking about sun protection

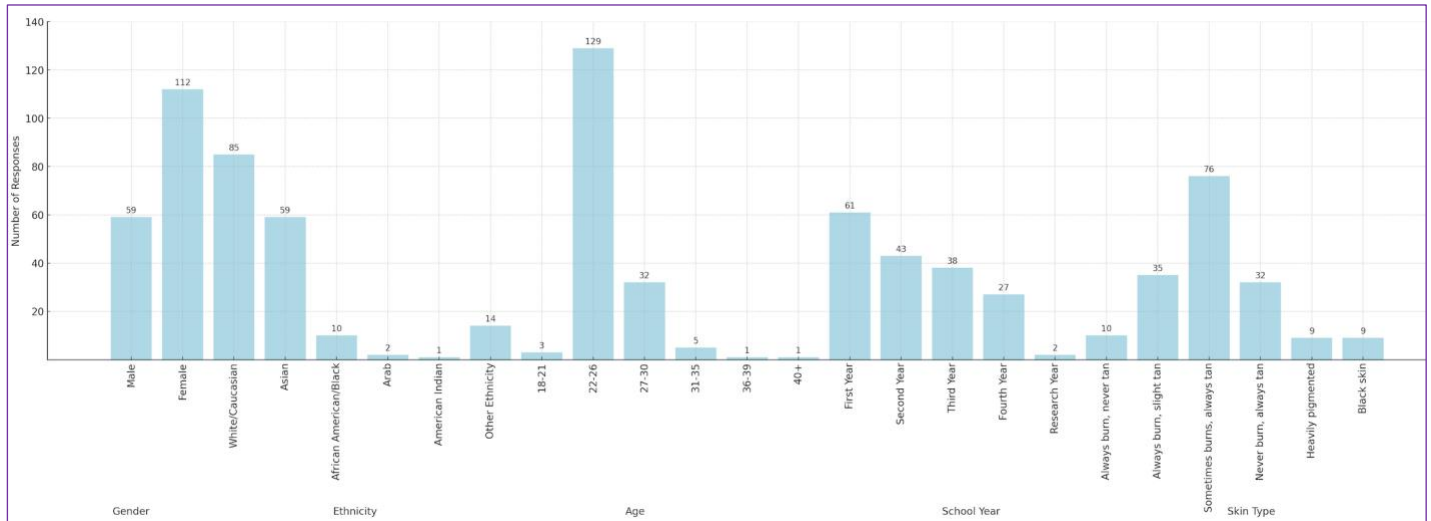


Figure 1. Demographics of Survey Respondents

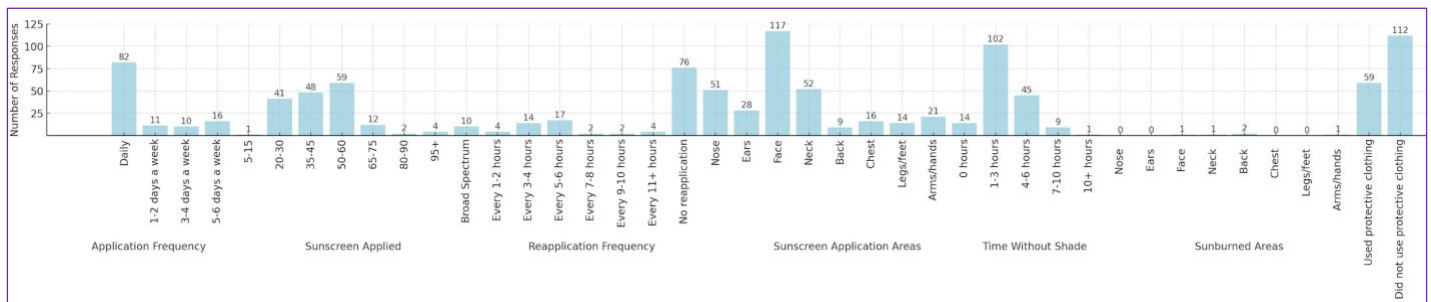


Figure 2. Sun-Protective Measure Responses

during office visits and lack of proper training”⁵. Proper sun safety education in medical school has been shown to increase the likelihood of future sun-safety-related patient counseling⁶. Addressing skin-protective measures in medical school can decrease the risk of skin cancer among medical students and their future patients. Future interventions can aim to educate medical students on sun safety.

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