

## Influence of Gender, Race, and Psychiatric Disorders on Sun Protective Behavior and Outcomes: A Population-Based Study

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**Abstract :** Sunscreen usage is emphasized in public health strategy as it reduces the risk of sunburns and skin cancers. This study aims to explore factors that influence sun protective behavior and outcomes. Data was received from the National Health Interview Survey (NHIS) 2020. Adults were asked how often they wore sunscreen when outside on a sunny day. Consistent use (“always”) of sunscreen, the incidence of sunburn within a year, and ever having a diagnosis of skin melanoma were compared by gender, race, and the diagnosis of anxiety, depression, and dementia. Individuals identifying as a mixed race were excluded. Statistical analysis was adjusted for large-scale surveys using STATA VSN 7.0, and a two-sided  $p < 0.05$  was considered significant. Of the 37,352 participants (53.18% females, 75.01% white, 10.49% black, 0.76% Indian Americans, 5.60% Asian), 13.11% had a diagnosis of anxiety, 14.78% depression, and 0.84% dementia. Females wore sunscreen more often than males (24.72% vs. 10.91%,  $p < 0.001$ ). White individuals wore sunscreen most frequently; black individuals the least (17.37% vs. 6.49%,  $p < 0.001$ ). White individuals had the highest rate of sunburn (25.61%,  $p < 0.001$ ) and a history of skin melanoma (3.38%,  $p < 0.001$ ). Participants with anxiety, depression, and dementia all had statistically significantly decreased sunscreen use and increased frequency of sunburn compared to the general population. Only those with dementia had an increased incidence of skin melanoma (2.85% vs. 1.22%,  $p = 0.009$ ). Dermatologists and public health professionals should consider gender, race, and psychiatric comorbidities when counseling patients on sun protection.

**Keywords :** sun protective behavior, psychiatric disorder, melanoma, sunburn

**Conference Title :** ICD 2023 : International Conference on Dermatology

**Conference Location :** Manila, Philippines

**Conference Dates :** February 20-21, 2023