

Association between manual labor and sunburns among U.S. adults

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Background

- Excessive exposure to ultraviolet (UV) radiation is a well-established risk factor for a range of health problems, most notably skin cancer and sunburn [1].
- Recent updates on the prevalence of sunburn, particularly among those involved in manual labor, are scarce for broad populations [2].

Objective

This study aims to provide updated insights into the prevalence of sunburns among adults engaged in manual labor in the U.S. by analyzing data from the 2013-2018 National Health and Nutrition Examination Survey (NHANES) [3].

Methods

We conducted a retrospective analysis of adults aged 20-59. We merged three 2-year cycles of NHANES data to create our dataset. Incidences of sunburn and psoriasis were recorded. Multivariable logistic regression analyses were performed using STATA/SE 18.0. *P*-values <0.05 were considered statistically significant.

Results

Manual Labor	Sunburn (weighted %)*	AOR (95% CI)	<i>P</i> -value
All participants (20-59 years old)			
Yes	1093/2733 (50.2)	1.28 (1.17-1.49)	0.001
No	2778/8396 (44.7)	1.00 (Reference)	
Females			
Yes	387/919 (52.6)	1.40 (1.11-1.77)	0.005
No	1665/4924 (44.4)	1.00 (Reference)	
Males			
Yes	706/1814 (49.1)	1.07 (1.03-1.45)	0.023
No	1113/3472 (45.0)	1.00 (Reference)	
Ages 20-39			
Yes	677/1500 (55.3)	1.92 (1.15-1.72)	0.002
No	1581/4079 (50.2)	1.00 (Reference)	
Ages 40-59			
Yes	416/1233 (43.8)	1.17 (0.93-1.47)	0.179
No	1197/4317 (39.4)	1.00 (Reference)	

Table I: Association between sunburn and manual labor among adults aged 20-59 in NHANES from 2013-2018

Summary of Findings:

- Our analysis included 11,129 participants; 36 individuals were excluded due to a lack of information on manual labor and sunburns.
- The weighted prevalence of sunburn among manual laborers was 50.2% compared to 44.7% for those who did not participate in manual labor (Table I).
- There was a significant association between manual labor and sunburns among men, women, and participants ages 20-59 after adjusting for potential confounding (Table I).

Conclusion

- This study highlights a notable gap in sunburn awareness and prevention among U.S. adults involved in manual labor, despite known risks associated with prolonged sun exposure [4,5].
- A variety of approaches may be utilized to bridge this gap.
 - Implementing strict sun protection policies and education has been shown to improve adherence among paid manual laborers [2].
 - Education from dermatologists on sun safety measures may promote sun protective behaviors and thus reduce sunburns associated with manual labor in home settings [6,7].

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