Total body skin examination adherence among young adults with an increased risk for skin cancer

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Abstract

Although ultraviolent radiation exposure and skin cancer rates are rising in the US, there is not a consistent national message calling for routine total body skin examinations (TBSE) by a healthcare provider. This pilot study examined TBSE rates among adults at an increased risk for skin cancer (history of sunburn, indoor tanning use, excessive UV exposure, poor sunscreen use). Overall skin cancer prevention behaviors were insufficient among respondents (n=953) and only a quarter of respondents considered at an increased risk for skin cancer reported a TBSE. White, older students with light skin who regularly use sunscreen were significantly more likely to report a TBSE. These findings highlight the need for a national study examining TBSE across the lifespan among high-risk individuals.

Keywords: total body skin examinations, high-risk behavior, skin cancer prevention, UV, sunburn, sunscreen

Introduction

Skin cancer is the most common form of cancer; 20% of the US population will develop skin cancer during their lifetime and annual treatment costs top eight billion dollars [1, 2]. Ultraviolet (UV) radiation exposure from the sun or indoor tanning is directly related to the development of skin cancer [3, 4]. Despite widespread efforts to reduce sun exposure, increase sun protection, and eliminate indoor tanning, cancer rates continue to increase [1, 5]. As with other cancers, earlier detection through screening often leads to better chances of recovery and reduced expenses. However, there is not a current protocol for total body skin examinations (TBSE) by a healthcare provider to detect skin cancer even among individuals with an increased risk [6, 7, 8]. The American Academy of Dermatology and American Cancer Society have advocated for routine TBSE yet the US Preventive Services Task Force cites insufficient evidence to recommend TBSE [8,9, 10].

This study explored TBSE rates among adults with a history of sunburn, use of indoor tanning, excessive UV exposure, and poor sunscreen use.

A random sample of 6,000 students at a comprehensive southeastern U.S. university serving 15,275 undergraduate and graduate students based in a city of 913,010 residents were surveyed via email in November 2015 as part of the annual campus health behavior survey. The Institutional Review Board-approved cross-sectional study included questions about their skin health behaviors and demographic questions. The response rate was 15.9% with 953 students completing the survey. Data were analyzed with SPSS 19.1 using chi-square analysis and logistic regression.

Respondents ranged from 18 to 74 years of age (mean=24.77, SD=8.43) and were mostly women (73.1%) and white (69.8%). Sunscreen use was poor among respondents with 63% reporting not regularly using protection when outside on a warm, sunny day, 25% reporting using a tanning bed, 43% reporting spending an average of more than two hours in the sun per day during the previous summer,

and 63% reporting at least one painful sunburn in the previous year. A majority of respondents (95.3%) reported at least one attribute that would classify them as at increased risk for skin cancer, yet only 25.6% of those respondents reported having a TBSE. Interestingly, among the lower risk respondents, 42.2% of respondents reported a TBSE. Regression analysis showed that white, older students with light skin who regularly use sunscreen were significantly more likely to report a TBSE by a healthcare provider.

This study revealed that adults engaging in higher risk UV exposure are not being screened for skin cancer. These findings reinforce the need for a public health campaign to encourage a consistent national position statement to recommend annual total body skin examinations. Potential study limitations include self-report bias, self-selection bias, and recall error.

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