Changes in Sun Tanning Attitudes and Behaviors from 1995 to 2005

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Abstract

Students enrolled at a large public university in the Midwest completed sun tanning attitude and behavior measures in 1995 (n=151) and a different sample of students completed the same measures in 2005 (n=210). Attitudes about sun tanning remained relatively consistent, but sun tanning behavior frequencies have increased over the last decade. Sex differences were also found related to sun tanning attitudes and frequencies. These results have important implications for understanding health risks for skin cancer and physical appearance preferences.

Introduction

- Skin cancer currently inflicts more people in the United States than every other cancer combined. In 2005, the American Cancer Society estimated that 1 million people would be diagnosed with basal cell or squamous cell carcinoma and there would be 60,000 new cases of melanoma (Center, 2005). Death rates due to skin cancer have risen in the last decade. The Center for Disease Control (CDC) estimated 9,300 deaths due to skin cancer in 1995 and 10,590 in 2005.
- Beginning in 1994, the CDC implemented plans for a national skin cancer prevention and education initiative, which has grown each year since (Center, 2005). Other research has shown that the majority of college students sun tan and use tanning beds and although access to information on the dangers of sun tanning has increased, tanning behavior has remained consistent (Hillhouse, 1996). Additional studies found that education of adults may increase knowledge and affect short term tanning practices, but has little influence on long term tanning behaviors (Bauman, 2002; Beasley, 1997; USPSTF, 2003).

Predictions

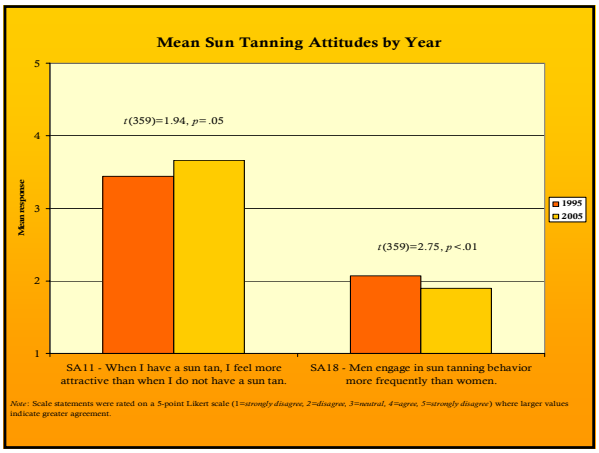
- Based on past studies, we hypothesized that attitudes about sun tanning would remain relatively consistent over the last decade (1995-2005), and that sun tanning risk behaviors would increase given the higher prevalence of skin cancer cases today.

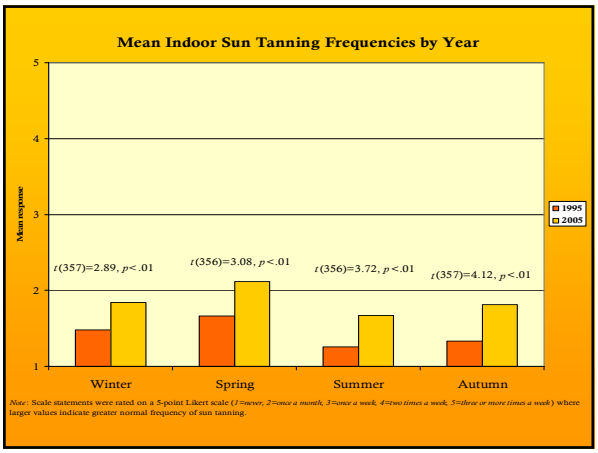
Method

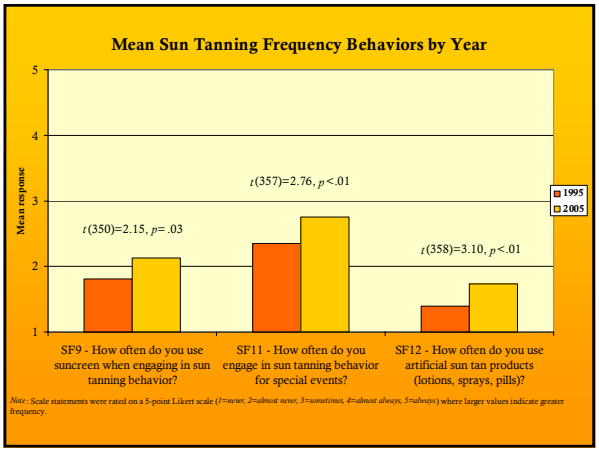
- *Participants*
  - To test these predictions, 151 male and female college students from a large, public university in the state of Ohio completed a survey of sun tanning attitudes and behaviors in 1995. Ten years later, 210 different male and female college students completed the same survey of sun tanning.
- *Materials & Procedure*
  - The survey consisted of 24 sun tanning attitude questions, 12 sun tanning frequency questions, two sun tanning motivation questions, and demographic questions that included age, sex, race, college rank, sexual orientation, and relationship status.

Results

- Only two sun tanning attitude questions showed a significant change from 1995 to 2005. The remaining question comparisons revealed similar responses between the 1995 and 2005 samples. The 2005 sample indicated that they feel more attractive when they have a suntan than when they do not have a suntan, and they believe that men engage in sun tanning less frequently than women compared to the 1995 sample.
- The sun tanning behavior questions indicated that the 2005 sample engaged in more indoor sun tanning behaviors in all seasons (spring, summer, fall, and winter), compared to the 1995 sample. The 2005 sample also indicated a greater frequency of using sunscreen, tanning for special events, and using artificial suntan products.
- Approximately the same percentage of students indicated they engaged in sun tanning behavior in 1995 (68.7%) compared to 2005 (62.9%), χ^2 (1, N=355)= 1.26, p=.26. In addition, there was no difference in believing individuals prefer boyfriends/girlfriends with tans in 1995 (43.7%) compared to 2005 (45.6%) χ^2 (1, N=337)= 1.66, p=.44.







Gender Differences Results

- A 2 (Year: 1995 or 2005) x 2 (Sex: male or female) ANOVA for each sun tanning attitude and behavior question was conducted to consider how sex may interact with year to determine sun tanning attitudes and behaviors.
  - A significant Year x Sex interaction was found for SA10 only. Males in 1995 believed sun tanned individuals had more fun than males in 2005, but females did not change responses between 1995 and 2005.
- Males reported significantly higher scores than females on SA2, SA3, SA4, SA9, SA10, SA12, SA13, SA 16, SA17, and SA19.
- Females reported significantly higher scores than males on SA5, SA18, SA20, SA21, SF1, SF3, SF5, SF6, SF7, SF9, SF10, SF11, and SF12.

Discussion

- These results suggest that college student attitudes about sun tanning have not changed in the past ten years, despite government and media programming designed to educate the public about skin cancer and tanning risks.
- Although the increased use of sunscreen in the past decade is encouraging, the overall trend of the current results suggests that college students are more likely to sun tan in 2005 than they were in 1995.
- Outdoor tanning practices remained consistent over the past decade, but it was interesting to learn how indoor tanning practices have increased.
- With respect to sex differences, males tended to value sun tanned mates more than females and females tended to participate in sun tanning and used sun tanning products more than males.

Limitations and Future Directions

- We recognize limitations with the current research. We did not assess student's knowledge of risks associated with sun tanning and we only tested college students in the Midwest. Attitudes and reported behaviors do not always represent actual behaviors.
- Understanding why people value mates with suntans and how to reduce this unhealthy preference is an important area of future research.
- Further investigations into how sun tanning attitudes can be changed and how new tanning technologies are related to health risks will be very informative for the next generation.