THE DARK SIDE OF IMPULSIVITY
The predictive value of impulsivity in relation to tanning

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ACKNOWLEDGEMENTS

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OUTLINE

- Introduction
  - Impulsivity and health behaviors
  - Tanning Risks and Prevalence
- Present Study
  - Procedure
  - Results
  - Discussion/Application of Theories
  - Limitations/Future Directions
IMPULSIVITY AND HEALTH

- Associations with binge drinking, tobacco use, and gambling problems (Stoltenberg, Batien, & Birgenheir, 2008)

- Higher rated of impulsivity have been linked to more tobacco, alcohol, and illicit drug use, low exercise frequency, not eating breakfast, not wearing a safety belt, lower estimated longevity, and more health concerns (Daugherty & Brase, 2010)
WHY IS TANNING A PROBLEM?

- Indoor tanning facilities offer more frequent tanning than allowed by many states: “Unlimited” tanning packages (Kwon et al., 2002)

- 28 Million Americans use indoor tanning annually (NCI, 2010)

- Women who tan >1/month before age 30 are 55-75% more likely to develop malignant melanoma (NCI 2010; IARC, 2009)
TANNING: PREVALENCE

- **Outdoor**
  - Ranges from 35% (ages 19-29) to 19% (65+) (Coups et al., 2008)

- **Indoor**
  - Adolescents: 13% (Bandi et al., 2010)
  - Young Adults (18-29): 20.4%
  - Adults (30-64): ~13%
  - Older Adults (65+): 9.8% (Heckman et al., 2008)
THE PRESENT STUDY: AIM

- Investigate the relation between self-reported impulsivity, reasons for tanning, intentions to tan, and sunscreen use in a sample of university students.
THE PRESENT STUDY: SAMPLE

- 496 students (83% women, 17% men)
- Average age 19 years
- 94 % Caucasian, 1.8 % African American, 0.8% Asian, 0.6 % Hispanic, 0.6 % Native American, and 0.2 % other
- Most had purposefully sunbathed outdoors (91%) or used indoor tanning facilities (73%)
MEASURES

- Impulsivity
  - Barrett Impulsiveness Scale-11 (BIS-11) (Patton, Stanford, & Barrett, 1995)

- Reasons for Tanning
  - Physical Appearance Reasons for Tanning Scale (PARTS) (Cafri et al., 2006)
    - Five subscales: Media, Family/Friends, Acne Reduction, General Attractiveness, Physical Fitness, Skin Aging
MEASURES

- Intentions to tan
  - “I plan to lie in the sun (i.e., sunbathe) during the next two weeks.”
  - “I plan to go to a tanning salon during the next two weeks.”

- Sunscreen use intentions
  - “I plan to use sunscreen on my face on a daily basis.”
  - “I plan to use sunscreen on all exposed areas of my body on a daily basis.”
RESULTS

- Impulsivity was positively related to intentions to tan
  - \( F(1, 464) = 21.41, \ p < .001, \beta = .21 \)

- Impulsivity was negatively related to sunscreen use outdoors
  - Face: \( F (1,392) = 7.68, \ p < .01, \beta = -.14, \)
  - Body: \( F (1,398) = 6.93, \ p < .01, \beta = -.13 \)
RESULTS

- Individual linear regression analyses to test relation between impulsivity and reasons for tanning
  - Media: $F(1, 460) = 14.7, p < .001, \beta = .18$.
  - Family/Friends: $F(1, 460) = 19.3, p < .001, \beta = .20$
  - Acne: $F(1, 460) = 6.62, p < .05, \beta = .12$
  - Physically Fit, General Attractiveness, Skin Aging: *ns*
RESULTS

- What moderates the relation between impulsivity and tanning?
  - Results showed a significant interaction between impulsivity and tanning due to the influence of the media.
RESULTS:

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*p < .05, **p < .01
DISCUSSION AND THEORIES
Why do people continue to tan?

**Theory of Planned Behavior** (Azjen, 1985)
- Intentions to tan and to use sunscreen

**Tripartite Theory of Body Image** (Thompson et al., 1999)
- Family, friends, media and acne concerns

**Problem Behavior Theory**
(e.g., Bagdasorov et al., 2008)
LIMITATIONS AND FUTURE DIRECTIONS

- All participants were undergraduate students, though this population has a high frequency of tanning behavior.
- Results were collected at one time point.
  - Cannot confirm that intentions to tan were related to actual tanning behavior.
- Future research should include multiple time points to assess directionality of relationship between impulsivity and tanning.
- Measures of delay discounting in addition to self-report measures of impulsivity may help shed light on this question.
REFERENCES


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