Recall of warning and safety regulatory experiences of young women at indoor tanning salons

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Skin Cancer and Indoor Tanning (IT)

- Skin cancer is the most common cancer in the U.S. \[1\]
  - Melanoma = 6th most common cancer
- IT is implicated in \(\sim 400,000\) U.S. skin cancers annually \[2\]
  - IT before 35 years \(\Delta\) risk of melanoma \(\sim 59\%\)[3]
- 30% U.S. white women aged 18-25 yrs engage in IT annually\[4\]

2. Wehner et al. (2014). *JAMA Dermatol.*
3. Boniol et al. (2012). *BMJ.*
Indoor Tanning Regulations

  - Parental permission for minors to tan
  - Ban on IT among minors

- FDA regulates IT devices
  - Recommended exposure schedule
  - Eyewear provided
  - Timer control
  - Warning label
  - Black box warning label:

  ![Attention: This sunlamp product should not be used on persons under the age of 18 years.]

- Lack of point of sale regulations for adult IT users in U.S.
Indoor Tanning Industry Self-Regulation

• Voluntary membership trade organizations (e.g., American Suntanning Association, Smart Tan Association)

Internal training guidelines for salon staff: [1]

• Consent form – risks of UV exposure
• Skin type
• Avoiding sunburns from IT

Past Research

• IT salon practices
  – Inconsistent information provided [e.g. 1-4]
  – Instances of misleading information [e.g. 2, 3]

Objectives of our study

1. Do IT users recall being provided with warnings of long-term risks and safety guidelines at tanning salons?

2. Are very fair-skinned individuals using IT?
   • If so, do very fair-skinned IT users have different experiences at salon compared with other users?

4. Heilig et al. (2005) Cancer Causes Control
Participants

- Recruited from a nationally representative Internet-based survey panel administered by GfK Knowledge Networks
- 273 women aged 18-25 ($M = 22.3$, $SD = 2.34$)
- Inclusion criteria: reported prior use of IT, aged 18-25 years
- Lifetime IT sessions $M = 54.9$, $SD = 115.5$
- Past 12 month IT use: 50.2%

Skin Type

Race/Ethnicity

- Non-Hispanic White (82.8%)
- Non-Hispanic Black (2.9%)
- Non-Hispanic Other (3.5%)
- Hispanic (10.8%)

Very Fair (16.8%)  Fair (49.7%)  Olive (25.8%)  Light Brown (6.2%)  Medium Brown (2.5%)
### IT users’ recollections of warnings and safety guidelines given at salon

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely/Occasionally</th>
<th>Often/Every Time</th>
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<td>Consent form</td>
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<td>Risks of UV overexposure</td>
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<tr>
<td>Avoid sunburn when IT</td>
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<tr>
<td>Exposure schedule</td>
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<td>37.5</td>
<td>52.5</td>
</tr>
<tr>
<td>Medication warning</td>
<td>35</td>
<td>42.6</td>
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Bivariate analyses **very fair skin vs. other IT users**

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<tr>
<th></th>
<th>Very Fair Skin</th>
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Summary

• Participants did not consistently recall receiving warnings and safety guidelines
  – Depending on the message, between 9.9 to 35% of sample did not recall ever receiving these messages

• 35% of sample reported never being warned of photosynthesizing medications

• Individuals with very fair (VF) skin continue to engage in IT
  – Never reading/signing a consent form > among VF skin IT users
Limitations and Considerations

• Recall bias

• IT industry trade organizations ≠ governing bodies.

• Unknowns:
  – Salon affiliation with trade organization(s)
  – Salon staff training history with these guidelines.

• Efficacy of warnings in reducing health risks from IT unclear
  – No established recommendations re: frequency of warnings

• New FDA proposals
  – Adult IT users be required to sign a “risk acknowledgement certification that states that they have been informed of the risks to health that may result from the use of sunlamp products … before their first tanning session and every six months thereafter” [1]

Potential Future Projects:

- IT salon owners’ knowledge of and/or affiliation with trade organization(s)
- IT salon staff training experiences
- Optimum intervals for frequency of warning messages
  - New FDA proposals