Efficacy of a Web Intervention to Alter Skin Cancer Risk Behaviors in a US National Sample of Young Adults: An RCT

Carolyn J. Heckman, PhD, Susan Darlow, PhD, Lee Ritterband, PhD, Elizabeth Handorf, PhD, Sharon Manne, PhD
Fox Chase Cancer Center, Philadelphia, PA
National Cancer Institute R01CA154928

Methods

- **Eligibility**
  - 18-25 years old, US resident
  - Moderate to high risk of skin cancer on the Brief Risk Assessment Tool (Glanz et al., 2003)

- **Online recruitment by Survey Sampling International (SSI) during spring/summer**

- **Randomization to:**
  1. UV4.me (based on the Integrative Model for Behavioral Prediction; Fishbein et al., 2003)
  2. Skin Cancer Foundation website
  3. Assessment only

- **Primary outcomes (at 3 and 12 weeks)**
  - Self-reported UV exposure and skin protection

**Modules**

- Here we recommend some Modules for you based on the questions you filled out. Your recommended Modules are highlighted in yellow, but feel free to click on any of the Modules. Click the Completed Modules link to see the list of Modules you have already completed.

- You can now use your personalized Avatar. As you complete Modules, you'll have access to more items for your Avatar like clothes/sunscreens. Keep close eye on your Avatar to prevent it from getting a suntan!
Baseline Demographics (n = 965)

<table>
<thead>
<tr>
<th>Variable</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age [M(SD)]</td>
<td>21.8 (2.2)</td>
</tr>
<tr>
<td>Geographical area</td>
<td></td>
</tr>
<tr>
<td>Northern (cooler)</td>
<td>640 (66.4)</td>
</tr>
<tr>
<td>Southern/HI (warmer)</td>
<td>324 (33.6)</td>
</tr>
<tr>
<td>Female Sex</td>
<td>637 (66.1)</td>
</tr>
<tr>
<td>Family history of skin cancer</td>
<td>339 (35.2)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>825 (85.7)</td>
</tr>
<tr>
<td>Non-white</td>
<td>63 (6.5)</td>
</tr>
<tr>
<td>Other/mixed</td>
<td>75 (7.8)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>92 (9.6)</td>
</tr>
</tbody>
</table>

UV Exposure at Weeks 0, 3, 12

Skin Protection at Weeks 0, 3, 12

Mechanisms

- Moderators
  - UV exposure
    - Indoor tanners
  - Skin protection
    - Family history of skin cancer
    - Symptoms of tanning dependence

- Process variables
  - UV exposure and skin protection
    - Number of modules completed/behavioral goals set
  - Skin protection
    - Found intervention more satisfying and helpful

- Mediators
  - UV exposure
    - Knowledge, exposure decisional balance (pros – cons), exposure norms
  - Skin protection
    - Self-efficacy, protection decisional balance (pros – cons), protection intentions
Discussion

- Exposure and protection improved for all groups
  - For UV4.me more than other groups
  - Control similar to assessment only
- Strengths
  - Young adult risks, theory-based, large national sample, RCT
- Limitations
  - Convenience sample, data quality, self-report outcomes
- Next Steps
  - Resubmit R01 to NCI focusing on intervention enhancement and national dissemination for March