

Effectiveness of an Internet intervention to decrease young adults' risk for skin cancer

Every year, almost five million Americans are diagnosed with skin cancer. Though many think of cancer as being an issue for older people, melanoma is the second most diagnosed cancer in adults aged 20-39. This is in part because younger adults expose themselves to ultraviolet radiation (UV) at high rates, but also because they simply don't engage in enough sun protection like seeking shade and wearing sunscreen.

To address these risky behaviors, researchers at Fox Chase Cancer Center created an Internet intervention targeted toward young adults. A web-based program was chosen because it would allow the researchers to reach a national sample, but also because the Internet is an ideal medium for targeting young adults. The aims of the intervention were to 1) decrease UV exposure and 2) increase sun protection behaviors in young adults at moderate to high risk of developing skin cancer.

Internet users aged 18-25 years who had never been diagnosed with skin cancer but were classified as being at moderate to high risk of developing it based on their skin type and UV exposure history were identified as candidates for the study. 965 eligible participants completed a baseline survey online measuring current sun protection (wearing sunscreen or protective clothing, etc.) and UV exposure behaviors (indoor and outdoor tanning). After completing the baseline survey, participants were randomly assigned to one of three study conditions: assessment only (completing surveys without receiving any intervention), control (an existing skin cancer website), and UV4.me (the experimental web intervention).

Using a mixture of media (images, audio, video, and text), the UV4.me website offered 12 modules based on important skin cancer-related topics, such as indoor tanning, the effects of UV exposure on health and looks, sunscreen, and protective clothing. Several parts of the website were tailored to each participant based on his/her baseline survey responses, resulting in individual module recommendations (e.g., participants who reported a history of indoor tanning were referred to the indoor tanning modules) as well as personalized feedback (e.g., "You said that no one in your circle tans. You're in good company!"). Participants were also encouraged to set healthy goals at the end of each module, such as not using a tanning booth for the next two weeks. Participants completed additional online surveys three and twelve weeks after baseline to reassess their UV exposure and sun protection behaviors.

Participants in the UV4.me condition reported significantly less UV exposure and more skin protection than those in the assessment only condition at both three and twelve weeks post-baseline. Interestingly, all three conditions showed decreased UV exposure and increased sun protection from baseline to three and twelve weeks, so it is possible that merely participating in a study about reducing risk for skin cancer made people want to be more careful about their sun

exposure. However, statistical analyses showed that the UV4.me intervention showed the strongest effect on these behaviors, indicating that though the Internet is a great way to reach this population, a tailored, interactive program may be the most effective way to help young adults modify their skin cancer risk behaviors.

To our knowledge, this is the first published report on the efficacy of a web-based prevention intervention designed to modify skin cancer risk behaviors targeted to at-risk young adults in a national randomized controlled trial. Next steps for this line of research will be to better understand specifically how the intervention changed behaviors, how to improve the intervention (e.g., make it available via smartphone), and how to get more young adults to use the website.

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