Medical Xpress

Study touts ways to teach youths about skin cancer prevention

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Virtually every parent has at some point told their children to put on sunscreen before going outside. And those parents could just as likely tell you there's no more sure-fire way to make sure a child ignores your message than to deliver a lecture. A University of Kansas professor has co-authored a study that shows technology and carefully crafting the message could be the keys to getting adolescents to take skin cancer and sun exposure protection seriously.

Yvonnes Chen, assistant professor of journalism, took part in a study that worked with farm youths in rural Virginia to test if innovative technologies such as a wristwatch that monitors sun exposure, a specially designed intervention and improved media literacy could change adolescents' attitudes about sun exposure. Health districts in southwest Virginia have one of the highest ultraviolet radiation exposure and sunburn rates in the nation, and farm youths are particularly vulnerable to the problem as they spend large amounts of time outdoors. But the problem is far from exclusive to the area.

"We decided to test if technology and education could help reach farm and rural youth. For us it's about helping prevent overexposure to harmful UV rays and learning what we can do to improve young people's understanding of skin cancer prevention," Chen said.

The researchers worked with youths age 14 to 16 in an agricultural education class in a southwest Virginia high school. They gauged the youths' attitudes and knowledge about sun safety, artificial tanning, skin

cancer prevention and more. After delivering a specially developed intervention, they found the program was effective and showed potential to reach more youths and adults, albeit with room for improvement. The study was conducted and co-authored by Donatus Ohanehi and Kerry Redican of Virginia Tech.

While previous preventive strategies aimed at youths and adolescents have been effective at improving their knowledge of skin cancer and prevention, they have not been particularly effective at improving their attitudes, the authors wrote. Their intervention focused on skin cancer monitoring and surveillance. The youths were issued a UV-monitoring wristwatch as part of the "SunWatch" program. After an initial consultation to determine skin type and their individual risk for burning and damage, the students entered data into the devices and wore them during their daily activities.

The watches calculate skin cancer risk and can notify wearers when they've reached dangerous levels of exposure. Additionally, they recommend protective measures such as reapplying sunscreen, seeking shade and wearing protective clothing. The watches were more popular with young people than previous interventions that required a "sun diary," or paper-and-pen method in which participants keep track of their sun exposure. However, despite initial enthusiasm for the gadgets, youths later reported they were bulky and not necessarily user-friendly.

"These monitoring tools are helping people know when to take action and monitor their sun exposure," Chen said. "They may not be the perfect device, but our findings show that technology can be effective in improving their awareness and education about skin cancer prevention."

The findings show that further research to explore other novel technologies and test them with larger research groups outside of rural areas has great potential to improve skin cancer prevention knowledge

for youths across the country. The researchers found improved attitudes and educational levels among the study's participants and hope to expand the SunWatch program to adults.

As part of the program, young people took part in three multimedia lessons that focused on improving media literacy, skin cancer components, risk factors and different types of skin cancers. The first lesson delivered skin cancer related risk and protective factors. A second lesson, called "Dear 16 Year Old Me," featured people who had suffered skin cancer or lost loved ones to the condition sharing what advice they would give themselves when they were younger. An advocacy component, in which the participants took a pledge to be vigilant in sun protection, was included as well, as research has shown that people are more likely to stick to health plans when such advocacy is involved. A final lesson discussed how media glamorized celebrities with tanned skin and the risks of artificial tanning. It also featured a 16-year-old girl diagnosed with skin cancer discussing her experience.

The findings show that technology, when combined with a message tailored specifically to its audience, has great potential to improve education and awareness about skin cancer.

"We want to empower young people to know they have a choice and can make a difference in their own health outcomes," Chen said. "Hopefully by combining these methods and increasing their awareness, we can do that for our youth and get their families involved as well."

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