

IMPACT OF KNOWLEDGE AND UNDERSTANDING OF THE UVI ON SUN PROTECTION BEHAVIOR AMONG STUDENTS

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Introduction:

The Global Solar Ultraviolet Index (UVI) is a numeric representation of ambient UV radiation levels used to indicate skin damage risk and serve as a public health tool to encourage appropriate sun protective behaviours. The influence of UVI knowledge and understanding on protective behaviour is, however, not well understood.

Objective:

To explore the associations of students' knowledge and understanding of the UVI with self-reported sun protective behaviours.

Methods:

Data on UVI knowledge and understanding, as well as sun protection behaviours, were collected in a cross-sectional survey of 27 state or state-integrated New Zealand schools. Year 8 students who reported having seen or heard of the UVI had the correctness of their understanding assessed through agreement with statements (1) 'as the UVI increases, the sun's rays get stronger' and (2) 'as the UVI increases, you need to use more sun protection', but disagreement that 'as the UVI increases, it means you can spend more time in the sun.' The sun protective behaviours of students able to demonstrate understanding of the UVI, by correctly answering all three questions, were compared with students who had neither seen nor heard of the UVI and / or did not correctly answer all three questions.

Results:

Of 266 students who answered the three UVI comprehension questions, 44 who had seen or heard of the UVI, correctly answered all three questions. Although elevated odds ratios suggest some association between UVI understanding and positive protective behaviour, for example, sunscreen use (OR: 1.98; p-value: 0.436; 95% CI: 0.57- 5.82), no statistically significant results were obtained. These results remained similar when controlling for age and sex.

Conclusions:

Our results suggest that sun protective behaviour is not associated with having seen or heard of the UVI and correctly interpreting how it works, however, this finding may be affected by small sample size and the influence of other factors. The questionnaire measures may require testing and revision, since they refer only to increase or decrease in the UVI numeric scale. Visualisation of UVI metrics, with static or animated graphics, may be important when testing children's understanding of this public health tool.