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Sun Safety in Elementary School: Trialing Strategies for Keeping Children Protected

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To the Editor,

Many Canadians fail to use sunscreen or seek shade despite the effectiveness of sun-safe practices.[1] Sun-safety habits develop in elementary school, and targeting this age group may be beneficial.[2] An Edmonton, Alberta study identified interventions that could improve sun-safety habits in elementary school children.[3] The purpose of this study was to develop, implement and evaluate interventions described by Li et al [(1) 30 minute educational presentation, (2) reminders for students to practice sun-safety, (3) the addition of sun-safety items to school supply list, and (4) sunscreen samples provided and accessible for students at school] in two grade-6 classrooms in the same school. Teachers from two classrooms were contacted for permission and informed consent forms were sent to parents for a quasi-experimental design with one classroom as the control and the other as the intervention. Only students with consent forms and verbal assent were enrolled. The intervention classroom received the four interventions during the study period (April to June 24, 2022) while the control classroom received them afterward to ensure fairness. A validated sun safety paper-based questionnaire adapted from Glanz et al[4] was given to enrolled students from both classes at the start and end of the study period. These surveys were anonymous and asked participant demographics (Supplemental Table 1) and sun safety habits.

The responses were tallied and recorded in Microsoft Excel, and subsequent analysis was performed in SAS 9.4 (Supplementary File 1). Regressions and chi-squared tests, using a level of significance of 0.1, were used to identify statistically significant intervention effects. Forty-seven students participated, 25 in the control class and 22 in the intervention class (all responded pre- and 45 post-intervention). On average, students from both classes reported spending an additional 0.4 hr outside on weekends with no statistically significant difference. During weekdays, the intervention class reported 0.4 hr increase while the control class reported 0.3 hr increase. This difference in time spent outdoors during the week between the two classes was not statistically significant (p value = .05524).

Sun safety preparedness appeared to increase in both classes in June compared to April but was more pronounced in the intervention class with more shade-seeking (p value = .0011). Descriptively, the pattern of sun protective behaviors reported by the intervention class suggested improvement compared to the control class, but the sample size was too small to conclude the difference was statistically significant. Specifically, the trend towards improvement included the use of sunscreen, long sleeves, and hats. (Supplemental Table 2)

Study limitations include self-reported sun protection behaviors, although self-report measures have been validated among children and adults.[4] A longitudinal impact assessment was not conducted, and we did not explicitly address factors such as family influence or health conditions; research is needed to explore these multilevel factors. This approach and results may apply to similar elementary school children in urban settings. Future interventions should aim to be comprehensive in addressing multilevel factors to sun safety utilization and aim to observe a longitudinal effect as we have attempted in this study.

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Ethics Approval

Ethical approval was obtained from the University of Alberta Health Research Ethics Board-Pro00108449. Anonymity was maintained at every step during questionnaire collection. Consent and assent were attained from all participants and their parents/legal guardians. Each participant had the option to withdraw from the study without academic penalty.

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Declaration of Conflicting Interests

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Supplemental Material

Supplemental material for this article is available online.

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