

RESEARCH LETTERS

A Survey Based Study on the Sun Safety Knowledge of Students Attending Public Schools in San Antonio, TX

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ABSTRACT

1 in 5 Americans will develop skin cancer in their lifetime but 80% of skin cancer is preventable. According to the World Health Organization, the majority of sun exposure occurs before the age of 18. Because children spend much of their time outdoors, teachers should ensure students have enough knowledge to protect themselves from the sun. After speaking with various educators and parents in the San Antonio, TX community, it became apparent that insufficient knowledge is provided to students and families regarding sun damage and protection. A 1 hour powerpoint presentation was created and given to 3rd grade and 5th grade classes at 10 public elementary schools in San Antonio, TX. An 8-question pretest and posttest was also provided to the students. The 8-question test assessed how much the students had learned from the presentation, if they currently protect themselves from the sun, and whether they use sunscreen. 106 students in 3rd grade and 95 students in 5th grade took both pre- and posttests. Both classes improved their score from the pre to the posttest. 3rd graders missed an average of 2.45 questions on the pretest and 2.12 questions on the posttest. 5th graders missed an average of 3.29 questions on the pretest and 1.21 questions on the posttest. Additionally, only 37% of 3rd graders and 15% of 5th graders claimed that they always use sunscreen. From the results of the study, it is apparent that students improved their knowledge regarding sun damage and protection by listening to the presentation. Therefore, it is imperative that children, parents, and teachers continue to be educated in San Antonio, TX so that the next generation can protect themselves from the sun.

1 in 5 Americans will develop skin cancer in their lifetime but 80% of skin cancer is preventable. According to the World Health Organization, the majority of sun exposure occurs before the age of 18.¹ Because children spend much of their time outdoors, teachers should ensure students have enough knowledge to protect themselves from the sun. Children and adolescents are much more likely to listen to important health messages in a school environment, as they

feel safe, comfortable, have peer support, and role models they see in teachers.^{2,3} By developing proper sun protection practices at a young age, students will be more likely to continue these practices into adulthood.²

After speaking with various educators and parents in the San Antonio, TX community, it became apparent that insufficient information is provided to students and families regarding sun damage and protection. *Be Sun Safe* is

an innovative curriculum that was developed to address this problem. A short powerpoint presentation as well as an educational handout were provided to children in San Antonio regarding sun damage and protection. The powerpoint and handout focused on explaining the negative effects of UV damage, how sun exposure can lead to skin cancer, who is at risk for getting skin cancer, the optimal amount of time people should be out in the sun, how frequently sunscreen should be applied, and the SPF value of sunscreen that should be purchased. The presentation and handout were evaluated by local educators in San Antonio.

A 1-hour powerpoint presentation was given to 3rd grade and 5th grade classes at 10 public elementary schools in San Antonio, TX. An 8-question pretest and posttest was also provided to the students. The 8-question test assessed how much the students had learned from the presentation, if they currently protect themselves from the sun, and whether they use sunscreen. The data collected was utilized to determine the effectiveness of the presentation and what needs to be done to help students, parents, and teachers increase their protection from the sun.

106 students in 3rd grade and 95 students in 5th grade took the pre- and posttest. Both classes improved their score from the pre- to the posttest. 3rd graders missed an average of 2.454 questions on the pretest and 2.121 questions on the posttest. 5th graders missed an average of 3.290 questions on the pretest and 1.210 questions on the posttest (Figure 1). Additionally, only 37% of 3rd graders and 15% of 5th graders claimed that they always use sunscreen (Figure 2). The most commonly missed question on the pretest was “Who is at risk for getting skin cancer and the time of greatest sun exposure?”. The most commonly missed question on the

posttest was “What is the mechanism by which sun damage leads to skin cancer?”.

Figure 1.

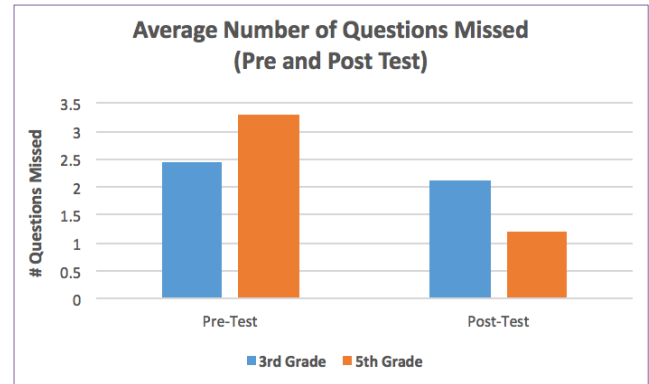
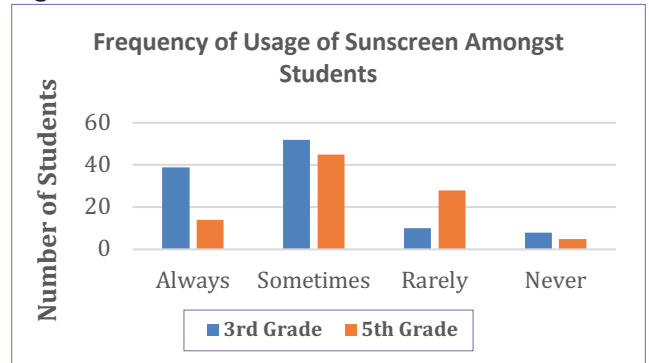


Figure 2.



The study results clearly demonstrate that students improved their knowledge regarding sun damage and protection by listening to the presentation. It seems that the 5th graders were less knowledgeable regarding sun damage and protection compared to the 3rd graders. These class groups may need to be educated more. Moreover, many of the 5th grade students do not protect themselves from the sun, according to the survey. There is also a limited number of students that always use sunscreen. Therefore, it is imperative that children, parents, and teachers continue to be educated in San Antonio, TX so that the next generation can properly protect themselves from the harmful effects of the excessive sun exposure. It would also be interesting to see how this data

varies from state to state and how other age groups would perform on the pre and post test. I plan to follow up with these kids in the future to see whether their knowledge regarding sun protection has improved with time.

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