

Background

- Centers for Disease Control and Prevention (CDC) reported 19% of students nationwide were bullied at school and 15% were cyberbullied.¹
- Adolescents involved in bullying as victims, bullies, or bystanders are more likely to engage in suicide-related behavior, including the improper use of weapons.²
- Prevention in the pediatric population is crucial, as 87 children, teens, and young adults are injured or killed by guns every day in the U.S..³
- Early intervention and preventative education may reduce incidents of violence, including in the Classroom Connection partner school district, whose students are referred to the county's courts (and subsequently youth detention centers) at a disproportionately high rate.

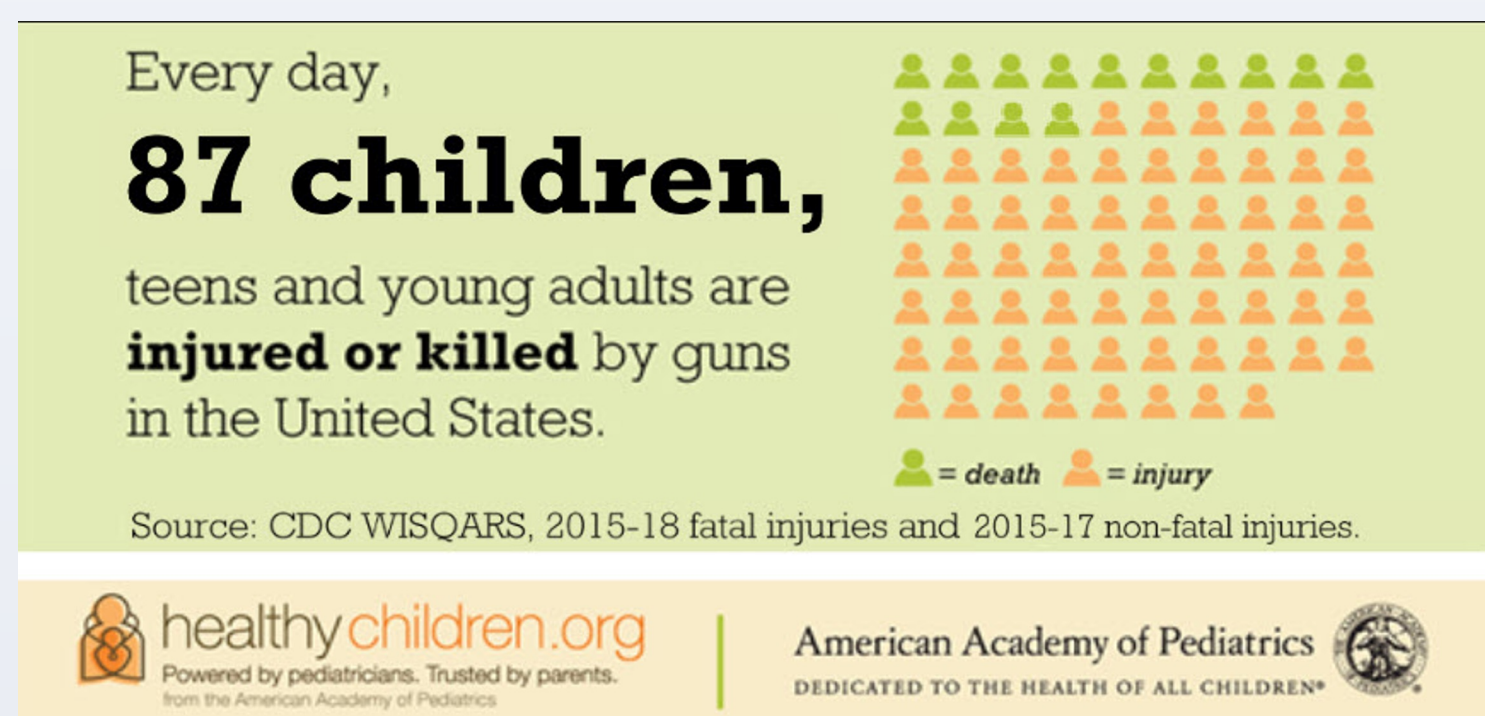


Fig. 1. CDC statistic showing the impact of gun violence on pediatric populations in the U.S..³

Purpose

Classroom Connection is a medical student-initiated program that promotes health and wellbeing of adolescents through longitudinal health education and mentorship. In-person lessons and penpal exchanges are conducted to support adolescents in career development, health, and academic success. One of these interactive lessons was developed to discuss the prevalence, implications, and prevention of weapon safety and cyberbullying issues in the school environment.

Objectives

The Classroom Connection Weapon Safety and Cyberbullying lesson was created with the aims to:

- Assess adolescents' prior general knowledge on the prevalence, implications, and prevention of weapon safety & cyberbullying issues.
- Create a safe space for open conversation regarding issues of weapon safety & cyberbullying.
- Provide resources and increase adolescents' confidence in addressing safety or bullying threats.

Methods

Classroom Connection provides monthly sessions to middle school students at a diverse, magnet school in an underserved school district recently released from state financial oversight. Medical students created the following interactive lessons:

- Health Career Exploration
- Time Management
- Mental Health
- Cardiovascular/Physical Health
- Weapon Safety/Cyberbullying

For the Weapon Safety and Cyberbullying lesson, medical students led small and large group discussions with middle school students to:

- Encourage reflection on prevalence & impact of cyberbullying and weapon violence.
- Brainstorm safety measures and interventions for bullying or violent situations.
- Create a class pledge to prevent cyberbullying.
- Identify two adults to contact in unsafe situations.

Pre- and post-tests were administered through Kahoot, an interactive online quiz platform that collects real-time responses.



Fig. 2. (left) Medical student facilitators encouraging middle school students to share their thoughts on weapon safety and bullying.

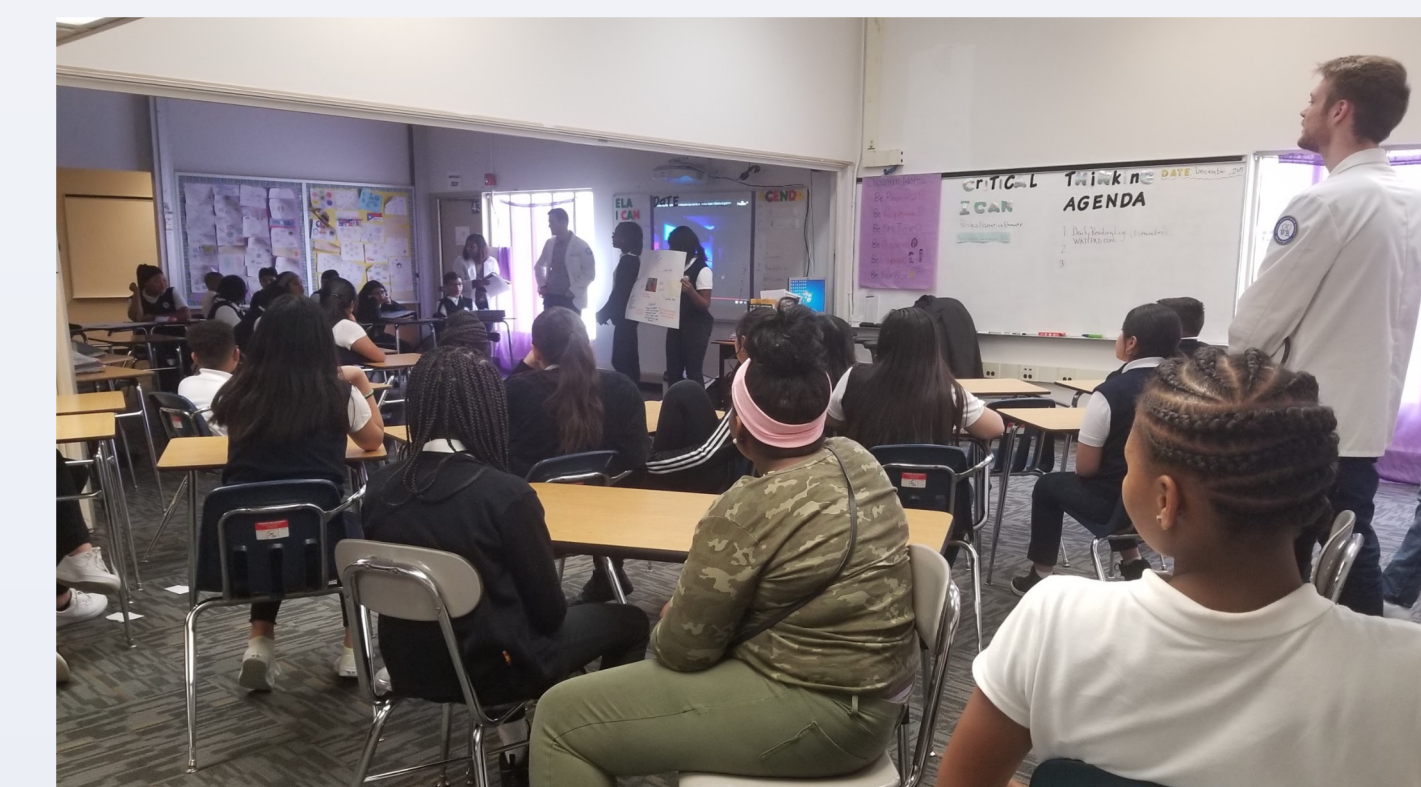


Fig. 3. (right) Middle school students creating a pledge to hold themselves accountable for cyberbullying prevention.

Results

Thirty-three middle school students participated in the Weapon Safety and Cyberbullying lesson led by nine medical student facilitators. Pre- and post-test assessments are summarized in Tables 1 and 2 indicating a general increase in knowledge and confidence related to weapon safety and cyberbullying prevention (Oakland University IRB#1215235-3).

Pretest Survey	n (%)
Weapons Safety	N=33
True or false: Weapon safety issues never happen at school.	
True*	28 (85)
True or false: In most school shootings, at least one person knew about the attacker's plan but did not report it.	
True*	32 (97)
Every day ___ kids, teens, and young adults are killed or injured by guns in the US.	
12	1 (3)
25	5 (15)
78*	6 (18)
104	21 (64)
___% of children live in a home where guns are stored.	
0	1 (3)
5	4 (12)
33*	15 (45)
50	13 (39)
Cyberbullying	N=31
True or false: Bullying is only when someone is physically hurt.	
False*	29 (94)
What behaviors are considered bullying?	
Physical	1 (3)
Emotional	1 (3)
Verbal	1 (3)
All of the Above*	28 (31)
How many students skip school each day in the US for fear of being bullied?	
100	3 (10)
18,000	8 (26)
160,000*	16 (52)
1,000,000	4 (13)
Have you ever experienced cyberbullying or witnessed a friend being cyberbullied?	
Yes	26 (84)

* reflects correct response.
Table 1. Pretest survey results

Posttest Survey	n (%)
Weapons Safety	Responded Yes N=32
Do you feel confident about what to do in the case of an issue with weapon safety?	25 (76)
Do you feel equipped to teach someone how to be safe with weapons?	20 (61)
Do you feel like you have a plan for resources you can access if you encounter an issue with weapon safety?	30 (91)
Compared to before the lesson, do you feel like you know more about weapon safety?	28 (85)
Cyberbullying	Responded Yes N=32
Do you feel confident about what to do in the case of an issue with cyberbullying?	21 (94)
Do you feel like you have a plan for resources you can access if you encounter an issue with cyberbullying?	31 (94)
Compared to before the lesson, do you feel like you know more about cyberbullying?	27 (82)

Table 2. Posttest survey results

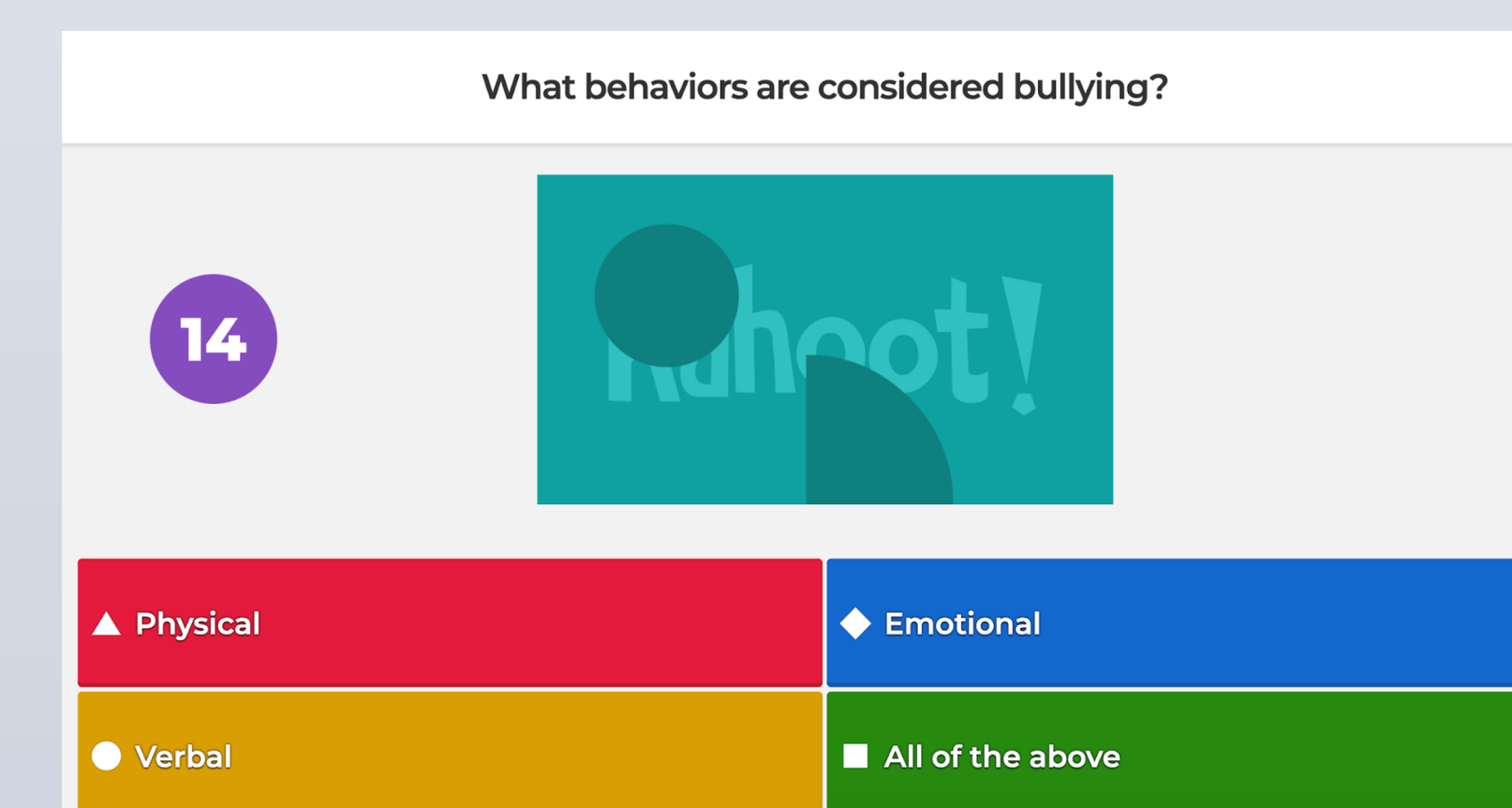


Fig. 4. Kahoot online quiz question and answer options from the Weapon Safety and Cyberbullying lesson.

Conclusion

- Based on middle school student responses, this lesson increased student knowledge and confidence when dealing with situations regarding weapon safety and cyberbullying.
- Health education and mentorship programs such as Classroom Connection can aid in the prevention of significant public health risks affecting the pediatric population.

Significance & Innovation

- Adolescents receiving positive influence and support from adults, schools, and communities are less likely to engage in high-risk behaviors, including bullying and violence.⁵
- Utilizing interactive technology can be an effective method for providing education and mentorship to adolescents.
- Classroom Connection provides a framework for schools to reinforce healthy adolescent behaviors and provide longitudinal support and resources for career development, health and safety, and academic success.



Fig. 5. Middle school students discussing bully, victim, and bystander perspectives and approaches to addressing bullying with peers.

References

- Kann L, McManus T, Harris WA, et al. Youth Risk Behavior Surveillance — United States, 2017. *MMWR Surveill Summ* 2018;67(No. SS-8):1–114.
- The Relationship Between Bullying and Suicide: What We Know and What it Means for Schools (2014). Retrieved from <https://www.cdc.gov/violenceprevention/pdf/bullying-suicide-translation-final-a.pdf>
- Gun Safety and Children (2020). Retrieved from <https://www.aap.org/en-us/about-the-aap/aap-press-room/campaigns/gun-safety/Pages/default.aspx>
- McLean RM, Harris P, Cullen J, et al. Firearm-Related Injury and Death in the United States: A Call to Action From the Nation's Leading Physician and Public Health Professional Organizations. *Ann Intern Med*. 2019;171:573–577.
- Shackleton N, Ph D, Jamal F, et al. School-Based Interventions Going Beyond Health Education to Promote Adolescent Health : Systematic Review of Reviews. *J Adolesc Heal*. 2016;58(4):382–396.

Acknowledgements

The program is a collaboration between OUWB, OUWB Pediatric Interest Group (PIG), and OUWB Passport to Medicine (P2M). The authors would like to thank OUWB Compass, OU-Pontiac Initiative, and the Phillip & Elizabeth Filmer Foundation for program funding.