

# How do school shootings affect students' mental health?

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## Abstract

Over the past two decades, there have been more than 250 school shootings in the United States. Sadly, many students and teachers have died in these tragic events. Although the number of shootings seems high, a school shooting is actually a very low-probability event. But how do school shootings affect those who survived?

We wanted to see the effects of school shootings on students' mental health. We examined the effects of 44

school shootings on an important measure of youth mental health: the number of prescriptions for antidepressants. We found out that school shootings lead to a significant increase in antidepressant use among children. Moreover, the effects on mental health can be long term. However, the effects on mental health are smaller in areas where there are more psychologists and social workers.

## Introduction

Have you ever had a fire drill at school? It can be quite loud and scary! But it's for the good of the students. They get to practice what to do in case of a real fire. This way they learn how to behave, where to go, and how to stay safe. Furthermore, fire drills help with reducing confusion and panic.

How about school shooting drills? The idea is the same – students practice what to do if a gunman shows up at school. School shootings remain a low-probability event for any particular school, but they occur frequently in the United States as a whole, and schools want to be prepared in case this tragedy affects them.

In the last two decades, there have been about 250 school shootings in the United States. There are approximately 131,000 K-12 schools in the United States, so schools affected by shootings represent a small proportion. Yet overall, more than 240,000 students have been on school grounds when these shootings occurred. Unfortunately, some students and teachers have died. It's pretty normal for public attention to focus on the victims. But what about the many more students who have experienced these incidents and survived?

Experiencing such a tragedy can harm students' *mental health*. And sadly, the negative consequences can last for years. Knowing the impact school shootings have on surviving students can guide interventions and support for affected students.



School shootings can have long-term negative effects on students' mental health.  
Photo: © Inzmam Khan

# Methods

To discover the effects of school shootings on students' mental health, we used the number of prescribed antidepressants among children as an indicator. **Our idea is simple: the traumatic event harms students' mental health.** Thus, more children would turn to *mental health providers* and might have to take prescribed antidepressants to cope.

First, we identified 44 schools where shootings have occurred between 2008 and 2013. We then found out how many children near these schools were prescribed antidepressants two years before and two years after every shooting so we could see the shooting's effect on prescriptions. When we could, we also collected antidepressant use data for up to six

years following the shooting to see how long-term the effects were. In addition, we compared these data with prescription data in the same periods but in areas further away from the schools, since that helps us see how antidepressant use might have looked if there hadn't been a shooting.

We also took into account:

- the different number of mental health providers in the separate school areas and
- the crime rates in the different areas.

# Results

There are 44 school shootings in our study. We categorized them as fatal (with at least one death) or non-fatal (without any deaths).

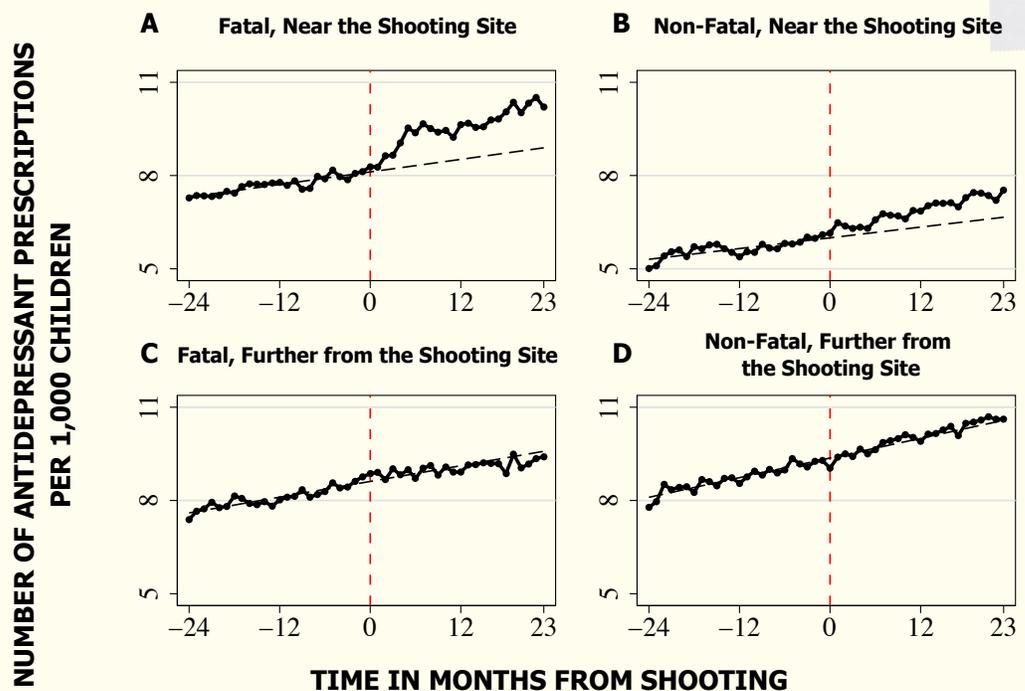
By analyzing the data we found out that:

- antidepressant use increased noticeably (over 21%) after fatal shootings, (Figure 1);
- there was no significant change in antidepressant use following non-fatal shootings;

- the increase in antidepressant use after a fatal shooting lasted for years;
- in areas with more mental health care providers who don't prescribe medication, like psychologists and social workers, the increase in antidepressant use was smaller; and
- the increase in antidepressant use after a fatal shooting was not different between areas with higher and lower crime rates.

**Figure 1:** Antidepressant use among children two years before and two years after fatal and non-fatal shootings

How did the shootings affect antidepressant use in the areas near the shooting sites compared to the areas further away?



## Discussion

School shootings are tragic events. Not only have there been a lot of deaths, but the surviving students suffer as well. The large increase in antidepressant use after school shootings demonstrates this clearly. **Sadly, sometimes the bad effects on students' mental health can last for years.** This can lead to problems in education and later in their lives at work. The effects can also make it hard for survivors to form happy relationships with other people.

School shootings also impact students who are more used to violence. We can see this from the noticeable increase in antidepressant use even in areas with higher crime rates. **On the other hand, areas where there are more psychologists and social workers show a lower increase in antidepressant use.** Perhaps the people in those areas rely on treatment that doesn't involve prescription medication, like behavioral therapy.

## Conclusion

There is no single reason why school shootings occur. But there are usually signs that someone wants to hurt themselves or other people (you can see them in the "Know the Signs" link below). Moreover, in almost all cases, the attacker has shared their plan with others. **Don't feel embarrassed to talk to a trusted adult if you notice or hear something that makes you think a classmate might want to**

**hurt someone.** Your parents and your teachers want you to feel happy and safe. **If you have experienced gun violence at your school, do not hesitate to seek help from a trusted adult or a mental health professional.**

## Glossary of Key Terms

**Antidepressants** – medication that can treat some mental health conditions, like depression, including some relevant for shooting survivors.

**Mental health** – the way children (and adults) think and feel about themselves and the world around them. Good mental health helps kids cope with problems. It also helps kids build positive relationships, good social skills, good behavior, etc.

**Mental health providers** – people who can help with mental health conditions. Here, we divide them into prescribing (can prescribe you medication – usually physicians and psychiatrists) and non-prescribing (can't generally prescribe medication, like psychologists and social workers).

**Traumatic event** – an event that causes a lot of stress. It can cause physical, emotional, spiritual or psychological harm.

## Check your understanding

1 Why did we analyze antidepressant use among children?

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2 What is the difference in the effects on students' mental health after fatal school shootings compared to non-fatal ones?

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3 Should schools practice school shooting drills? Why or why not?

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4 What are some reasons behind school shootings?

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5 How can we prevent school shootings?

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## REFERENCES

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