

## Adolescent Mental Health? There's a 'Vaccine' for That

*School-based interventions that help students regulate their emotions in healthy ways have proved effective at preventing pandemic-related issues*

Ask any teenager if they would like to talk about mindfulness and mood thermometers with their peers a dozen times in one school year, and most would decline the opportunity. But ask them instead if they would like a vaccine to ward off the worst mental health impacts of the past year and a half, and most would raise their hands without thinking.

Adolescence is a critical time for mental health, and most teens have an intimate relationship with stress. Before the pandemic, one out of every five U.S. teens developed a mental disorder, with half of all mental disorders occurring by age 14 and three quarters by the mid-20s. During the pandemic, approximately 40,000 children lost a parent, and many young people have been exposed to other traumas, such as food insecurity and homelessness, that increase risk for depression, anxiety and post-traumatic stress disorder. The pandemic will likely cause a spike in youth mental health problems, with long-term psychological fallout.

The good news is that, for youth, schools are an effective setting for preventing mental health problems. School-based interventions that enhance students' capacity to regulate their emotions in healthy ways, such as reframing a problem positively, have proven effective at preventing or reducing mental health problems.

Our research offers one example: our team delivered a 12-session group prevention program called RAP (Relax, be Aware and do a Personal rating) Club to eighth graders in 29 Baltimore City public schools. Most schools served marginalized communities where poverty limits family prospects and youth are exposed to high rates of violence and other trauma. RAP Club included mindfulness practices, such as breathing breaks with a "mood thermometer," to teach students nonjudgmental awareness of feelings and thoughts. Role-playing gave youth tools to promote positive communications. To demonstrate how pent-up stress affects the body, students shook up a bottle of seltzer until the liquid exploded; that was always a favorite.

Four months later, assessments with RAP Club students showed they had significantly fewer trauma symptoms than students who did not participate. And group discussions with RAP Club students highlighted other benefits. They talked about improved coping mechanisms. "I been dealing with stress way better.... Way, way better," said one boy.

Other students agreed. "When I get distressed... I used to smoke to get it off my mind. See now... I don't do it as much." "When I'm angry—I don't just snap on everybody." Students saw changes in their sense of self. "I really used to have negative thoughts about myself, about the world.... Now I'm way more confident." And they described improved mental health: "Depression went away from me...I used to stay in my room a lot, listen to sad, depressing music, and just not talk to nobody. RAP Club... helped me—I dance more. I talk to my mother about everything now ... we all happy and all that. Our life just changed."

COVID then provided an unexpected opportunity for a natural experiment. We contacted and assessed a subset of approximately 150 trial participants during the pandemic, one to four years after they completed our programming. Youth who did not take part in RAP Club showed increased anxiety during the pandemic, which makes sense. We are in extraordinarily stressful times.

However, youth who participated in RAP Club, who learned how to manage the stress generated from the prepandemic hardships they faced, did not show a significant increase in anxiety. The program had provided a degree of immunization against this new batch of stress.

When this program began, we did not anticipate COVID-19 and the many ways it has disrupted childhood. As we dig deeper though, we start to see the potential of mental health interventions to protect against negative impacts of future trauma exposure.

As a new academic year approaches, most policy makers and educators will look to "check the box" and provide some sort of programming, or teacher training, that acknowledges the emotional damage the pandemic has inflicted. But these new findings show urgency for programming that goes much further.

Schools need resources to deliver evidence-based programs in an ongoing fashion to promote and protect student mental health. These programs need to be culturally and developmentally appropriate and delivered in a coordinated fashion across grades K-12. While all students should receive universal group programming, more intensive services should be offered to those needing additional support. Finally, program evaluation is critical to assess whether programs are effective and for whom they work best. Partnerships with universities can support data collection and analyses. Students' and parents' perspectives on what works must also shape solutions.

In coordination with student vaccination efforts, school leaders and policy makers should leverage the potential for school mental health programs to serve as "mental health vaccines." As one of our focus group participants noted, "When you learn your

feelings, you kind of find like inner peace. That happens, yeah.” We owe it to our nation’s youth to provide all the emotional protection we have available.

1) Foram realizadas avaliações com os participantes do programa discutido no texto após sua conclusão. Os achados dessas avaliações mostraram que:

- a) Uma das tarefas preferidas dos alunos era chacoalhar uma garrafa de refrigerante.
- b) Houve grande interesse dos alunos que não participaram do programa após a divulgação dos benefícios encontrados.
- c) Os estudantes que participaram do programa tiveram menos sintomas traumáticos do que aqueles que não participaram.
- d) Diversos benefícios foram comentados pelos participantes.

2) O texto apresenta dados estatísticos relacionados a saúde mental. Assine a única alternativa que contém uma informação falsa ou ausente no texto.

- a) Um em cada cinco adolescentes desenvolviam uma desordem mental antes da pandemia.
- b) Metade das desordens mentais ocorriam aos 14 anos.
- c) Milhares de crianças perderam seus pais durante a pandemia.
- d) Traumas decorrentes da pandemia aumentam o risco de depressão, ansiedade e desordem do estresse pós-traumático.

3) Assinale a alternativa que contém uma palavra que pode substituir “leverage”, no trecho “school leaders and policy makers should leverage the potential for school mental health programs to serve as “mental health vaccines.” ”, mantendo uma ideia semelhantes e sem quebrar regras gramaticais.

- a) Consider.
- b) Support.
- c) Discourage.
- d) Implement.

4) Sobre a metodologia da pesquisa discutida no texto, assinale a única que contém uma informação verdadeira e contida no texto.

- a) Os pesquisadores ministraram um programa de 12 sessões para oito estudantes de escolas públicas.
- b) Todos os alunos são oriundos de comunidades marginalizadas.
- c) O programa incluiu práticas de atenção plena, como pausas para respiração.
- d) Uma atividade de interpretação de papéis foi utilizada para praticar os efeitos do estresse reprimido.

5) A palavra “assess”, no trecho “Finally, program evaluation is critical to assess whether programs are effective and for whom they work best.”, pode ser substituída, sem grandes mudanças de significado ou quebra de regras gramaticais, por:

- a) Acknowledge.

b) Consults.

c) Manages.

d) Evaluate.

6) Em discussões em grupo, os participantes do programa comentaram sobre diversos benefícios após suas participações. Os pesquisadores comentam que, analisando esses testemunhos, foi possível constatar diversos benefícios, exceto:

a) Melhores mecanismos de enfrentamento.

b) Mudanças no senso de identidade.

c) Melhor saúde mental.

d) Aumento na autoconfiança.

7) Os pesquisadores comentam que a pandemia revelou um benefício que essas intervenções de saúde podem trazer. Assinale a alternativa que contém esse benefício.

a) Há um forte interesse de jovens que não participaram anteriormente do programa.

b) Há uma possibilidade de proteger os jovens contra impactos negativos da exposição de traumas futuros.

c) Os resultados do programa podem servir como estímulo para a implementação de programas fixos em escolas públicas.

d) Há pouco interesse pública no programa.

8) Durante a pandemia, os pesquisadores realizaram um novo experimento com diversos participantes que completaram o programa anteriormente, além de estudantes que não participaram do programa. Qual o resultado deste experimento?

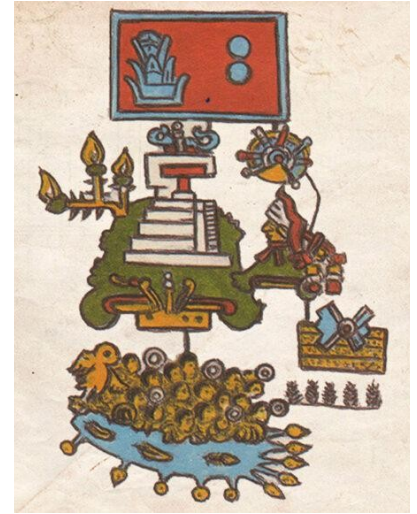
Os jovens que não participaram do programa mostraram maior ansiedade durante a pandemia do que aqueles que participaram do programa.

**This pictogram is one of the oldest known accounts of earthquakes in the Americas**

*The written chronology in a 16th century codex was created by a pre-Hispanic civilization*

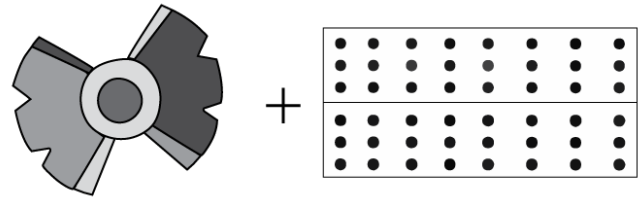
A 50-page codex of colorful, complex pictograms that dates to the early 16th century includes the most complete — and one of the oldest — written chronologies of early earthquakes in the Americas.

The Telleriano-Remensis, which was created by an unknown pre-Hispanic civilization, describes 12 separate earthquakes that rocked what’s now Mexico and Central America from 1460 to 1542, researchers report August 25 in *Seismological Research Letters*. The famous codex was written by specialists called *tlacuilo*, meaning “those who write painting” in the Nahuatl language spoken by Aztecs and other pre-Hispanic civilizations in the area.



Using other codices from the region, researchers had previously identified the combination of two pictographs that denotes an earthquake. One shows four helices around a central circle or eye, and stands for *ollin*, meaning “movement” in Nahuatl. The other pictograph shows one or more rectangular layers filled with dots, and means *tlalli*, or “earth.” For daytime earthquakes, the eye is open; for nighttime quakes, it’s closed.

Seismologist Gerardo Suárez of the National Autonomous University of Mexico and social anthropologist Virginia García-Acosta of the Center for Research and Higher Studies in Social Anthropology, both in Mexico City, pored over the Telleriano-Remensis. The researchers were looking for representations of quakes, comparing what they found to accounts of quakes in other pre-Hispanic codices and texts written later by Spanish friars.



The Telleriano-Remensis uses a pictorial representation of a 52-year cycle to roughly date the quakes. Years are represented by four signs— *tecpatl* (knife), *calli* (house), *tochtli* (rabbit) and *acatl* (reed) — arranged in 13 permutations. Those images helped the researchers match some pictorial accounts of quakes, including one in 1507, to later descriptions of the events.

Little more is recounted about the precise locations of these quakes or the damage they caused, although one image suggests that a quake triggered flooding that drowned warriors. Other codices may contain more clues, the researchers say, which could help create a more complete chronology of the quakes that shook this ancient world.

9) Assinale a alternativa que melhor resume os achados discutidos no texto.

a) Pesquisadores foram capazes de decifrar códices que representam terremotos e datar os eventos.

b) Pesquisadores descobriram um antigo livro que apresenta pictogramas representando terremotos.

c) Pesquisadores descobriram a autoria de antigos pictogramas que retratavam terremotos nas Américas.

d) O texto discute os efeitos que antigos terremotos causaram nas Américas, os quais foram representados em pictogramas.

10) Como os pesquisadores foram capazes de datar os pictogramas que representam terremotos no Telleriano-Remensis?

a) Através da análise de outros códices da região.

b) Identificando o símbolo equivalente ao terremoto comumente usado por civilização pré-hispânicas.

c) Identificando os padrões de cores e símbolos dos pictogramas.

d) Através da comparação de códices pré-hispânicos e textos escritos por freires espanhóis.

11) Na Figura 1, o texto apresenta uma breve explicação do pictograma retratado. Com base nas informações apresentadas, assinale a alternativa que contém uma informação falsa ou não apresentada no texto.

a) O pictograma retrata um terremoto que ocorreu em 1507.

b) O terremoto é representado como símbolo composto por um círculo amarelo com hélices azuis, brancas e vermelhas.

c) Há um olho vermelho no centro do símbolo.

d) O afogamento de 1800 guerreiros em um rio representa o impacto do terremoto.

12) Todas as alternativas abaixo podem substituir a expressão “pored over”, no quarto parágrafo, mantendo ou aproximando-se da ideia apresentada no trecho, exceto:

a) Considered.

b) Examined.

c) Analyzed.

d) Studied.

13) Apenas uma das alternativas abaixo apresenta uma informação verdadeira e presente no texto sobre o Telleriano-Remensis. Assinale essa alternativa.

a) São 50 páginas de pictogramas simples e coloridos.

b) Datado do século 16, é a mais antiga cronologia escrita sobre terremotos nas Américas.

c) Ele foi criado por uma civilização pré-hispânica desconhecida.

d) São descritos 12 terremotos que abalaram a região do México e da América Central entre 1460 e 1540.

14) Segundo os pesquisadores, o que pode ser melhor compreendido através do estudo de outros códices?

- a) Como civilizações passadas representaram outros eventos.
- b) Os efeitos que os terremotos causaram.
- c) A autoria dos códices.
- d) **A cronologia dos terremotos que abalaram o mundo antigo.**

15) A Figura 2 apresenta uma explicação sobre a decodificação do símbolo equivalente a terremoto. Qual das alternativas abaixo contém uma informação falsa ou não apresentada no texto?

- a) A combinação de dois símbolos representa um terremoto.
- b) **O primeiro contém quatro hélices com um olho central, ou tlalollin.**
- c) O segundo é uma caixa retangular cheia de pontos em camadas, ou tlalli.
- d) A união de ambos os símbolos representa “movimento da terra”.

16) O autor comenta que o olho central no símbolo que representa o terremoto tem significado. O que ele pode representar?

**O olho aberto representa terremotos durante o dia, enquanto o olho fechado representa terremotos durante a noite.**