

Reporting Summary

Nature Portfolio wishes to improve the reproducibility of the work that we publish. This form provides structure for consistency and transparency in reporting. For further information on Nature Portfolio policies, see our [Editorial Policies](#) and the [Editorial Policy Checklist](#).

Statistics

For all statistical analyses, confirm that the following items are present in the figure legend, table legend, main text, or Methods section.

n/a	Confirmed
☐	☒ The exact sample size (<i>n</i>) for each experimental group/condition, given as a discrete number and unit of measurement
☒	☐ A statement on whether measurements were taken from distinct samples or whether the same sample was measured repeatedly
☐	☒ The statistical test(s) used AND whether they are one- or two-sided <i>Only common tests should be described solely by name; describe more complex techniques in the Methods section.</i>
☐	☒ A description of all covariates tested
☐	☒ A description of any assumptions or corrections, such as tests of normality and adjustment for multiple comparisons
☐	☒ A full description of the statistical parameters including central tendency (e.g. means) or other basic estimates (e.g. regression coefficient) AND variation (e.g. standard deviation) or associated estimates of uncertainty (e.g. confidence intervals)
☐	☒ For null hypothesis testing, the test statistic (e.g. <i>F</i> , <i>t</i> , <i>r</i>) with confidence intervals, effect sizes, degrees of freedom and <i>P</i> value noted <i>Give P values as exact values whenever suitable.</i>
☒	☐ For Bayesian analysis, information on the choice of priors and Markov chain Monte Carlo settings
☒	☐ For hierarchical and complex designs, identification of the appropriate level for tests and full reporting of outcomes
☒	☐ Estimates of effect sizes (e.g. Cohen's <i>d</i> , Pearson's <i>r</i>), indicating how they were calculated

Our web collection on [statistics for biologists](#) contains articles on many of the points above.

Software and code

Policy information about [availability of computer code](#)

Data collection	No software was used for data collection.
Data analysis	Data was analyzed using Stata version 18.0

For manuscripts utilizing custom algorithms or software that are central to the research but not yet described in published literature, software must be made available to editors and reviewers. We strongly encourage code deposition in a community repository (e.g. GitHub). See the Nature Portfolio [guidelines for submitting code & software](#) for further information.

Data

Policy information about [availability of data](#)

All manuscripts must include a [data availability statement](#). This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A description of any restrictions on data availability
- For clinical datasets or third party data, please ensure that the statement adheres to our [policy](#)

All data, code, and materials used in the analysis will be archived in a publicly accessible repository.

Research involving human participants, their data, or biological material

Policy information about studies with [human participants or human data](#). See also policy information about [sex, gender \(identity/presentation\), and sexual orientation](#) and [race, ethnicity and racism](#).

Reporting on sex and gender	Participant gender information was collected through self-report. Male refers to self-identification as a male, coded 1, or female, coded 0. Gender differences were analyzed and reported.
Reporting on race, ethnicity, or other socially relevant groupings	Participant race, ethnicity, education in years, family annual income, and political affiliation were all collected separately through self-report. Descriptive statistics were computed for each form of gun violence and the corresponding mental health impacts. Multivariable logistic regression was used to generate adjusted odds ratios that estimate the associations between sociodemographic characteristics and both the presence and duration of mental health impacts. All analyses were weighted to provide nationally representative estimates. Age was measured in years by subtracting birth year from 2024. Respondents could self-identify with several racial/ethnic groups, which include White, Black, Hispanic, Asian, or Other/Multi, the latter of which included multiple races/ethnicities, Middle Eastern, and American Indian/Pacific Islander. White respondents were used as the reference group. Respondent education was based on six response categories, ranging from no high school to post-graduate degree completion, of the highest level of education completed, converted to years. Sixteen categories of annual family income (in thousands), ranging from less than \$10,000 to \$500,000 or more, were converted to mid-point dollar amounts. Respondents who did not respond to family income were assigned the mean value and a dummy variable was included in all models. If respondents described themselves as “leaning,” being a “not very strong,” or a “strong” Democrat or Republican, they were recorded as such, while those who stated they were independent or “Not Sure” were recorded as Independent: self-identified Republicans were used as the reference category. News interest, which captures the frequency with which respondents monitor government and public affairs, including hardly at all / don’t know (15.0%), only now and then (15.5%), some of the time (30.2%), and most of the time (39.4%), was used as a control variable; the latter was the focal category and former three pooled together as the reference category.
Population characteristics	Participants ranged in age from 19 to 96 with a mean of 48.8 (SD=17.9). Participants were 48.7% male and 51.3% female.
Recruitment	The authors contracted with an online market research firm (YouGov) to field a national survey of adults in the United States in January 2024. Guided by findings on mass shootings and victimizations from the Gun Violence Archive and the National Crime Victimization Survey, a sample of 10,000 individuals residing in the United States was generated using multistage matched design sampling (Table 4). The target population was enumerated using a synthetic sampling frame—by age, education, gender, and race/ethnicity—based on several national population data sources, including the American Community Survey public use microdata file. Sample matching was conducted by first drawing at random a target sample and then selecting individuals to be interviewed from a large pool of online opt-in panelists matched to the target sample.
Ethics oversight	This study was approved by the IRB at (Blind) University

Note that full information on the approval of the study protocol must also be provided in the manuscript.

Field-specific reporting

Please select the one below that is the best fit for your research. If you are not sure, read the appropriate sections before making your selection.

☐ Life sciences ☒ Behavioural & social sciences ☐ Ecological, evolutionary & environmental sciences

For a reference copy of the document with all sections, see [nature.com/documents/nr-reporting-summary-flat.pdf](https://www.nature.com/documents/nr-reporting-summary-flat.pdf)

Behavioural & social sciences study design

All studies must disclose on these points even when the disclosure is negative.

Study description	This study investigates the short- and long-term mental health impacts of different types of gun violence exposure in a nationally representative sample of 10,000 U.S. adults. Using a cross-sectional survey administered January 2024, we quantitatively assess the prevalence and duration of anxiety, depression, panic attacks, and post-traumatic stress symptoms (PTSS) following exposure to mass shootings and other forms of gun violence.
Research sample	The authors contracted with an online market research firm (YouGov) to field a national survey of adults in the United States in January 2024. A representative sample of 10,000 individuals residing in the United States was generated using multistage matched design sampling. Participants ranged in age from 19 to 96 with a mean of 48.8 (SD=17.9). Participants were 48.7% male and 51.3% female.
Sampling strategy	The target population was enumerated using a synthetic sampling frame—by age, education, gender, and race/ethnicity—based on several national population data sources, including the American Community Survey public use microdata file. Sample matching was conducted by first drawing at random a target sample and then selecting individuals to be interviewed from a large pool of online opt-in panelists matched to the target sample.
Data collection	Participants completed the survey questions independently online.

Timing	All data was collected in January of 2024.
Data exclusions	Inquiries into the place where personal exposure to a mass shooting incident occurred and the reason for presence at the location resulted in removing a small number of incidents in which respondents were not present on the scene (n=4), cases in which incidents occurred in war zones as part of military service (n=16), or cases that occurred outside of the United States that appeared independent of military service (n=20). There were also six instances where local community exposure occurred outside the United States. This was in addition to quality checks undertaken by YouGov to screen out respondents who did not meet quality control standards (e.g., speed throughs, attention checks, non-sensical responses, and duplicate internet protocol addresses).
Non-participation	Response rate was 38.6%.
Randomization	NA - this study uses a cross-sectional survey design

Reporting for specific materials, systems and methods

We require information from authors about some types of materials, experimental systems and methods used in many studies. Here, indicate whether each material, system or method listed is relevant to your study. If you are not sure if a list item applies to your research, read the appropriate section before selecting a response.

Materials & experimental systems

n/a	Involved in the study
☒	☐ Antibodies
☒	☐ Eukaryotic cell lines
☒	☐ Palaeontology and archaeology
☒	☐ Animals and other organisms
☒	☐ Clinical data
☒	☐ Dual use research of concern
☒	☐ Plants

Methods

n/a	Involved in the study
☒	☐ ChIP-seq
☒	☐ Flow cytometry
☒	☐ MRI-based neuroimaging

Plants

Seed stocks	Report on the source of all seed stocks or other plant material used. If applicable, state the seed stock centre and catalogue number. If plant specimens were collected from the field, describe the collection location, date and sampling procedures.
Novel plant genotypes	Describe the methods by which all novel plant genotypes were produced. This includes those generated by transgenic approaches, gene editing, chemical/radiation-based mutagenesis and hybridization. For transgenic lines, describe the transformation method, the number of independent lines analyzed and the generation upon which experiments were performed. For gene-edited lines, describe the editor used, the endogenous sequence targeted for editing, the targeting guide RNA sequence (if applicable) and how the editor was applied.
Authentication	Describe any authentication procedures for each seed stock used or novel genotype generated. Describe any experiments used to assess the effect of a mutation and, where applicable, how potential secondary effects (e.g. second site T-DNA insertions, mosaicism, off-target gene editing) were examined.