

U.S. Youth Attitudes on Guns



Quantitative Survey
Findings Report
and Preliminary
Qualitative Focus
Group Findings

July 2023

Everytown for Gun Safety

The Everytown for Gun Safety Support Fund is the education, research, and litigation arm of Everytown for Gun Safety, the largest gun violence prevention organization in the country. We build awareness about the complexities of gun violence in America so that every person—policymakers, volunteers, cultural influencers, business leaders, and more—can learn about the issues and become part of the solutions.

Polarization and Extremism Research and Innovation Lab (PERIL)

PERIL's mission is to utilize a public health approach to design, test, and scale-up evidence-based tools and intervention strategies to prevent hate, bias, and extremist radicalization.

Southern Poverty Law Center

The SPLC seeks to be a catalyst for racial justice in the South and beyond, working in partnership with communities to dismantle white supremacy, strengthen intersectional movements, and advance the human rights of all people.

Executive Summary

This report contains our findings from a multi-phase, mixed-methods study of youth attitudes toward guns and gun violence in the United States, conducted primarily in 2022.

74%
of U.S. youth agree that gun violence is a problem.

Rationale: This study aims to shed light on the following research question: **What are young people’s thoughts, feelings and beliefs surrounding guns and gun violence in the United States?** This research was inspired by: 1) the increase in gun violence, including mass shootings, within the U.S. in recent years; 2) the landscape of youth mental health and 3) the relative dearth of research into how youth think and feel about guns and gun violence in the United States.

Methods: This three-phase study included: 1) a mixed-methods coding and analysis of online gun-related content in order to assess prominent gun narratives between October 2021 and February 2022; 2) a quantitative survey using a U.S. national sample of 4,156 youth aged 14-30 (under 18 years old: n = 1,282 [30.85%]) fielded from September 16, 2022 – October 13, 2022, and 3) an ongoing (as of January 2023, n = 38) qualitative phase of focus groups/interviews with youth aged 14-30 recruited from the survey.

Quantitative Findings:

- A vast majority (74%) of U.S. youth and young adults ages 14 to 30 agree that gun violence is a problem.
- 42% of survey respondents report having at least somewhat easy access to guns.
- Approximately 25% of youth have experienced an active shooter lockdown.
- Youth know, on average, at least one person who has been injured or killed by a gun.
- School safety is a major concern for youth and worry about school shootings is associated with a host of negative mental health outcomes.

- Higher endorsement of male supremacist beliefs is associated with more mental distress (depression, anxiety, loneliness, post-traumatic stress), support for racist ideas, support for anti-government ideas and viewing more gun-related media.

Preliminary Qualitative Findings:

- While youth think that gun violence is a problem, they think it flows from the actions of individuals, especially those they perceive as “criminal,” “irresponsible,” “mentally ill” or “bad.” These descriptions tend to be racialized and classed.
- Youth separate legitimate and illegitimate uses of guns. “Legitimate” uses include protection (e.g., against “home invaders”), hunting and target shooting.
- Youth perceptions of safety are also racialized, classed and shaped by ideologies surrounding geography and folk-theories about urban-rural differences.
- Youth from rural areas perceive guns as a ‘fact of life’. Geographical regions are used as shorthand for particular community relations to guns/gun violence.
- Young, white, cisgender boys/men are frequently introduced to gun use through gendered bonding activities like hunting with fathers, grandfathers and friends.

Implications and Future Directions: Safety, mental illness and geography emerged as salient themes in this study. Longitudinal and ethnographic methods could amplify future analysis. For minors, decreasing gun access and increasing mental health care access are critical, but we must also target supremacist and antidemocratic ideologies that justify and rationalize the use of violence and the deployment of guns to facilitate that violence.

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Methods Overview

This multi-phase project utilizes a variety of research methods, reflecting the range of expertise (e.g., psychologists, anthropologists, sociologists) at the Polarization & Extremism Research & Innovation Lab (PERIL).

Digital Gun¹ Narrative Evaluation Methods

The codebooking phase identified narrative tropes and rhetorical strategies characteristic of outlets that feature guns, firearms enthusiasts and positive discussions of Second Amendment rights (hereinafter “pro-gun media”) (see Appendix B, Channel Identification and Procedure sections for more information). To accomplish this, quantitative language analysis was used to identify key terms, concepts and discursive clusters within pro-gun media. Complementary qualitative analysis then uncovered latent meanings below the surface of that same media content. Finally, further quantitative analysis was used to predict levels of audience engagement with pro-gun media based on the narratives and rhetoric identified through the mixed-method codebooking process.

Quantitative Survey Methods

The target population for this survey was U.S. teens and young adults ages 14-30. Participants were recruited from the NORC AmeriSpeak Panel, a probability-based panel designed to be representative of the U.S. population. Over 35,000 U.S. households selected at random were sampled using door-to-door interviewing and address-based sampling, providing sample coverage of approximately 97% of the U.S. household population. Participant recruitment was supplemented by Lucid, a non-probability online survey research panel. A total of N = 4,156 completed the survey (ages 14-17 [n = 1,282], ages 18-30 [n = 2,874]). Key self-reported variables measured in the survey include evaluations of pro-gun narrative arguments, gun attitudes and experiences, perceptions of safety, mental health outcomes, media consumption habits and ideological worldviews. Univariate and bivariate descriptive statistics, Pearson r correlations, t-tests and regressions were conducted for analyses.

Qualitative Focus Group Methods

Our methodology is based on grounded theory: a set of approaches to qualitative research characterized by the idea that theory-construction should flow from the data (Glaser and Strauss, 1967; Charmaz, 2000; Clarke, 2005, Birks and Mills, 2011). Thus, our approach is iterative and data collection and analysis occur simultaneously. Findings presented here are based on data collected from 60-90 minute focus groups and interviews (N = 21) with U.S.-based youth (N = 38) aged 14-17 and 18-30 respectively. We recruited these participants from the population of survey-takers who participated in the quantitative portion of this study. Focus groups and interviews were semi-structured and are ongoing (see Focus Group Protocol, Appendix D). This report includes preliminary findings based on an initial round of coding where codes and code groups were arranged according to categories that emerged from quantitative data (see Executive Summary).

¹“Gun” and “firearm” will be used interchangeably throughout this report. See Appendix A, Terms and Definitions for more details.

Project Overview

Guns have been the leading cause of death for American children and teens since 2020, and a record number of young people were shot and killed in 2021 (Centers for Disease Control and Prevention, 2021). Gun violence permeates the lives of American youth in many ways — whether they experience daily gun violence in their neighborhoods, live with an armed abuser, are injured in an unintentional shooting, attempt suicide with a gun or survive a mass shooting at their school, sporting event, mall, church or other gathering place.

4 of 5
young people agree
gun violence in the
U.S. is a problem.

More than 3,500 children and teens are shot and killed each year, 15,000 are shot and injured and an estimated 3 million are exposed to shootings (CDC, 2021; Everytown for Gun Safety, 2021a; Everytown for Gun Safety, 2021b). But there has been very little research exploring how young people feel about guns, what level of access they have to firearms and what shapes their attitudes toward gun ownership and gun violence. Given what we know about the nexus between gun violence and extremist ideologies (Everytown for Gun Safety, 2021c) and the staggering increase in gun sales during the COVID-19 pandemic (Miller, Zhang, & Azrael, 2021), understanding young people’s views about the role of guns in society and their lives is of great importance.

To explore these topics and more, Everytown for Gun Safety, the Southern Poverty Law Center (SPLC) and the Polarization & Extremism Research & Innovation Lab (PERIL) came together to study youth attitudes through: 1) a mixed-methods coding and analysis of online gun-related content in order to assess prominent gun narratives; 2) a quantitative survey using a U.S. national sample of 4,156 youth aged 14-30 and 3) an ongoing (as of January 2023, n = 38) qualitative phase of focus groups/interviews with people aged 14-30 recruited from the survey. We asked more than 4,100 young Americans between the ages of 14 and 30 questions about their access to guns, how safe they feel, their experiences with gun violence, their political views, the media they consume and how they think about male supremacy, racial resentment

and the Second Amendment, among other topics. We are conducting ongoing focus groups to further explore how all of these attitudes combine to form the prism through which young people view our country’s gun violence crisis.

The result is the following report, which provides groundbreaking, first-of-its-kind insights into how young Americans think about and use guns and the ways in which some come to view guns as a “socially imaginable” (Blanchfield, 2022) solution to everyday grievances and frustrations.

After the tumult of the pandemic and amid a rise in political polarization and violence, we believe that understanding the next generation’s attitudes about guns is vital to combating the rise of extremism and reducing gun violence. We hope these results will provide a strong foundation for researchers, public health officials, policymakers, educators, families and young people themselves to better understand youth attitudes toward guns and gun violence in an effort to help reduce gun deaths and injuries.

Summary of Key Quantitative Findings

Our study found that there is a broad consensus among young people that the level of gun violence our country is experiencing is a problem: 4 out of 5 agreed. There is also broad agreement that more gun laws could help reduce gun violence: 59% of participants agreed that gun safety laws should be stricter. Yet about 40% of youth reported at least “somewhat easy” access to a gun, with 21% reporting “very easy”

A young person’s access to guns, identification with gun culture and exposure to media relating to guns correlated with concerning beliefs like support for male supremacy, belief that the Second Amendment gives individuals the right to overthrow the government, higher levels of racial resentment and post-traumatic stress disorders.



access to a gun. In addition, nearly 17% of youth report that they plan to have access to a firearm in the future.

While attitudes about guns, gun ownership and personal safety varied widely among survey respondents, we found that young people with easier access to guns tend to hold stronger beliefs that they are safer with guns than without and that gun culture—a term that we left open to survey respondents’ interpretations—is a part of their identity.

Furthermore, a young person’s access to guns, identification with gun culture and exposure to media relating to guns correlated with concerning beliefs like support for male supremacy, belief that the Second Amendment gives individuals the right to overthrow the government, higher levels of racial resentment and post-traumatic stress disorders.

Perhaps unsurprisingly, political identity tremendously impacted young people’s attitudes about guns. The more strongly participants identified as Republican, the safer they felt in general, the more they believed they are safer with guns than without guns and the stronger they reported gun culture as being a part of their identity. In contrast, young people who think gun violence is a problem tended to have experienced more gun-related injuries and deaths, identified as women, identified more strongly as Democrats and scored lower in their support for attitudes such as male supremacy and racial resentment.

Given the connection we found between feelings of safety and support for gun ownership — and the reality that more guns actually increase the risk of gun violence (Reepling, et al., 2019) — we believe it is more important than ever to improve our understanding of how young people formulate their beliefs about firearms.

Feelings of Safety and Well-Being

More guns in the hands of more people in more places makes gun violence more likely, and young people reported feeling less safe in public and at school than at home. Data from Everytown show there has been an increasing amount of gunfire on school grounds over the past several years, including mass shootings at schools (Everytown for Gun Safety, 2023).

While mass shootings make up just 1% of gun deaths in the U.S. (CDC, 2021), they have an outsized impact on young people’s lives, due in part to the amount of media coverage they receive, the number of times specific communities are targeted and the prevalence of both lockdown drills and actual lockdowns that keep the threat of such violence front of mind. Our research shows this is a common experience: more than 1 in 4 respondents said they had been in at least one active shooter lockdown.

We also know the impact of gun violence on young people’s mental health is significant: exposure to firearm injury is clearly linked to high rates of post-traumatic stress symptoms, substance use and high rates of future injury

(Ranney, et al., 2019). But we know less about the psychological impact on young people of living with the threat of gun violence. Fear of death or injury, worrying about violent scenarios, having to learn and practice strategies to disarm or evade a school shooter — all of these impact a young person’s sense of safety and well-being. We found that youth who ruminate about school shootings also tend to have more post-traumatic stress and report greater average daily hours of gun-related media exposure.

But the depth and breadth of America’s gun violence epidemic mean the impact on youth goes far beyond mass shootings and includes gun homicides and suicides, domestic violence and unintentional shootings. Youth responded that they know, on average, at least one person who has been injured or killed by a gun. The more people that youth know who were injured or killed by gun violence, the worse they reported their anxiety, depression and post-traumatic stress symptoms to be.

The rise in gun deaths and injuries among children and teens comes at a time when youth mental health is already imperiled (Prinstein, 2022). The isolation and disruption of the COVID-19 crisis made the issue worse, but even before the pandemic, mental health challenges were the leading cause of disability and poor life outcomes among American youth.

The statistics are staggering: from 2009 to 2019, the proportion of high school students reporting persistent feelings of sadness or hopelessness increased by 40%, the share seriously considering attempting suicide increased by 36% and the share creating a suicide plan increased by 44% (Centers for Disease Control and Prevention, 2020). During the pandemic, rates increased for positive suicide risk screens, anxiety symptoms and depression symptoms among youth (Hawes, et al., 2021; Lantos, et al., 2022; Mayne, 2021; Office of the Surgeon General, 2021). With so many young people struggling with their mental health and a record number of guns sold in recent years, understanding how youth access and use guns has never been more urgent.

Youth Gun Access and Attitudes that Impact Gun Possession

There has been very little research about young people’s access to guns, and little is known about the way that youth feel about guns, gun ownership and common narratives about firearms (for example, that they “help the weak stand up to the strong” or that they are “the best way for people to defend themselves, their families and their communities”).

We found that youth with easier access to guns tended to hold stronger beliefs that the government is restricting our freedoms, that they are safer with guns than without guns, that the Second Amendment gives individuals the right to overthrow the government, and that gun culture is a part of their identity.

Similarly, the more easily respondents could access guns, the weaker their beliefs were that gun ownership should be restricted or that assault rifles should be banned. Furthermore, the stronger a respondent’s belief in being “safer with guns than without,” the higher they scored on both male supremacy and racial resentment. Gun access was highest among white youth (45% reporting somewhat easy or very easy access to guns), while Black youth (44%) and respondents who identified as multiracial/ethnic (43%) were comparable in ease of gun access.

59% of youth under 18 believe that gun control laws in the U.S. should be stricter than they are today.



For many, guns and gun ownership have come to symbolize the preservation of a certain type of Americanness: one based on the primacy of the white, cisgender and heteronormative nuclear family to the detriment of Black, Indigenous, Asian and Asian American, Latinx/a/o, Pacific Islander people and LGBTQ people. We saw some of these attitudes among the young people in our focus groups, one of whom put it this way: “I mean, you can’t make it illegal to have a gun. That would just be un-American.”

The minors (those less than 18 years old) in our study felt safer on average than those who were older than 18. We found 31% of youth under 18 believed they are safer with guns than without them, while 27% of them believed that adults in schools should be armed with guns. Minors’ belief in the ability of police to keep them safe was more complicated. Less than half (47%) of youth under 18 agreed that police keep “me and my family safe,” and 24% of the minors disagreed or strongly disagreed with that statement.

Minors are worried about school shootings. We found that 51% reported being worried about a shooting happening at their school or a school near them, and when asked if gun control laws in the U.S. should be stricter than they are today, 59% of youth under 18 believed they should.

The data we collected helped us understand how people come to understand guns as “American” and ways they are socialized to take for granted the link between American values like “freedom,” “autonomy,” “independence” and firearm ownership. We were able to identify patterns in their perspectives through quantitative methods and then contextualize the thoughts and feelings around those beliefs through qualitative methods. Given the connection between far-right extremism, misogyny and guns, understanding how these attitudes form when people are young is of particular interest if we want to disrupt that nexus.

The goal of this report is to present original research on these crucial questions in the hope that better understanding of how young people feel about, access and use guns will help educators, policymakers, public health officials and young people better tailor messages and campaigns aimed at reducing gun deaths and injuries, thereby providing a path forward to a safer future for young Americans.

Quantitative and Qualitative Findings

~40%
of the total sample
have at least
somewhat easy
access to a gun

Quantitative (Survey) Findings

Feelings of Safety

- There is high agreement that gun violence is a problem in the U.S. (mean = 4 out of 5).
- When asked how safe they feel in their home, school, work, neighborhood and state, youth feel safest at home (mean = 3.5 out of 4) and least safe in their U.S. state (mean = 2.5 out of 4) and at school (mean = 2.6 out of 4).
- The more an individual expressed worry about school shootings, the more they expressed worry about neighborhood shootings as well.*
- Youth living in metro areas reported feeling that crime was increasing in their community at higher rates than youth living in non-metro areas, controlling for the other variables in this model.**
- Youth who are worried about a shooting happening at their school or a school near them tended to identify as women/girls, identify as two or more ethnicities (compared to whites), identify as stronger Democrat, use more of both types of emotion regulation strategies (i.e. regulate their emotions using cognitive reappraisal, as well as expressive suppression), and scored lower on male supremacist ideation and racial resentment, controlling for the other variables in the model.**
- Participants who were more worried about a shooting in their neighborhood tended to have more post-traumatic stress (PTS), identified as women, came from lower income households, lived in metro areas, regulated their emotions more and scored lower on racial resentment, controlling for the other variables in the model. These associations

were weak, except for PTS, which was moderately associated with this attitude.

- Youth who thought gun violence was a problem tended to have experienced more gun-related injuries and deaths, identified as women, identified as stronger Democrat, used both emotion regulation strategies more (i.e. regulating emotions using cognitive reappraisal, as well as suppression of emotional expressions), and scored lower on male supremacy and racial resentment, controlling for the other variables in the model. Associations are weak, except for the racial resentment association with these attitudes, which was moderate in strength.
- Youth who trusted the police more tended to be less lonely, consumed a greater number of average daily hours of gun-related media, were older, identified as white compared to Black, Hispanic and multiracial, came from higher income households, used more cognitive reappraisal and scored higher on male supremacy ideation and racial resentment, controlling for the other variables in the model.**

Gun Access

- Across our total sample of 14-30 year olds, 22% (n = 920) reported “very easy” access to guns and 20% (n = 835) reported “somewhat easy” access. About 40% of the total sample have at least “somewhat easy” access to a gun, and an additional 16.92% (n = 412) of youth expect to have access to one in the future.
 - Under 18 years old: 27% reported having somewhat easy or very easy access to guns.
 - 18-24 years old: 41% reported having somewhat easy or very easy access to guns.

*All of the following Pearson r Correlations were significant at the $p < .001$ level.

** All of the following are weak associations.

Youth know, on average, at least 1 person who has been injured or killed by a gun. The more people that youth know who were injured or killed by gun violence, the worse their anxiety, depression and post-traumatic stress symptoms.

- 25-30 years old: 53% reported having somewhat easy or very easy access to guns.

- Youth with easier access to guns tended to hold stronger beliefs that the government is restricting our freedoms, that they are safer with guns than without guns, that the Second Amendment gives citizens the right to overthrow the government and that gun culture is a part of their identity (i.e., who they are as a person).
- The more easily respondents can access guns, the stronger their belief is that the government is restricting our freedoms.
- The stronger their belief is that they are safer with guns than without guns, the stronger their belief is that the Second Amendment gives us the right to overthrow the government.
- The more easily respondents can access guns, the more gun culture is a part of their identity.

Political Identity

- Political identity impacts gun-related attitudes and mental health outcomes tremendously. Stronger identification as Republican associated with stronger positive evaluations of all five gun narratives (average across familiarity, agreement and perceived argument strength for each narrative).**
- The more strongly participants identified as a Democrat, the more gun-related injuries and deaths they reported experiencing, and the more they supported gun safety regulation (higher belief that assault rifles should be banned, higher belief that gun access should

be restricted and higher belief that gun violence is a problem in the U.S.).

- The more strongly participants identified as a Democrat, the worse mental distress (depression, anxiety, loneliness) they reported and the more they ruminated about gun-related trauma (higher worry about school shootings, higher worry about neighborhood shootings and higher level of thoughts about guns in schools/work).
- Youth who thought the government is trying to take away “our” freedoms tended to have higher anxiety/depression, have experienced more gun-related injuries and deaths, were from lower income households, identified more strongly as Republican, used more cognitive reappraisal emotion regulation and scored higher on male supremacy ideation and racial resentment, controlling for the other variables in the model.**
- The more strongly participants identified as a Republican, the safer they felt, the more they believed they are safer with guns than without guns, the stronger they reported gun culture as being a part of their identity, the stronger they believed that guns help minorities defend themselves and the stronger they believed that adults at school should be armed.
- The more strongly participants identified as Republican, the more strongly they endorsed male supremacy beliefs and the higher their racial resentment scores.
- Youth who thought that restricting gun ownership will lead to fewer mass shootings tended to have higher post-traumatic stress, identified as women, identified more strongly as Democrat, used more expression suppression and emotion regulation and scored lower on racial resentment, controlling for the other variables in the model. Association with strength of political identity and racial resentment were moderate in strength. The rest were weak associations.
- Participants who thought gun control should be stricter today in the U.S. tended to have more post-traumatic stress, identify as women, identify as Asian compared to white, identify more strongly as Democrat, regulate their emotions more and score lower on male supremacy ideation and racial resentment, controlling for the other variables in the

~26%

of youth reported having been in at least one active shooter lockdown

model. Associations were weak except the association with racial resentment, which was moderate in strength and the difference between Asian and white, which was also moderate.

- A particularly high percentage of youth (20%) self-identified as Libertarian (n = 790) in this sample.
 - Libertarians tended to be younger — 80% of Libertarians in our sample were under 18 years old.
 - Twenty-two percent of Libertarians in our sample had at least one direct gun violence experience in their life.
 - Forty-six percent of Libertarians in our sample identified as white and 30% identified as Hispanic.
 - Forty-six percent of Libertarian youth said it is somewhat easy or very easy to access a gun.
 - Thirty-nine percent of Libertarian youth said they agree or strongly agree that they are safer with guns than without guns.
 - Thirty-seven percent of Libertarian youth said they agree or strongly agree with the statement, “I trust the police to keep me and my family safe.”

Experiences with Gun Violence; Related Injuries and Deaths

- About 26% (n = 1,078) of youth reported having been in at least one active shooter lockdown.
- Youth know, on average, at least one person who has been injured or killed by a gun.
- The more people that youth know who have been injured or killed by gun violence, the worse their anxiety, depression and post-traumatic stress symptoms.
- The greater number of gun-related injuries and deaths that participants reported having encountered, the worse mental health they reported, including higher scores on the Patient Health Questionnaire (PHQ) and on the Physician Care PTSD-5 instrument (PTS total).

Media Consumption

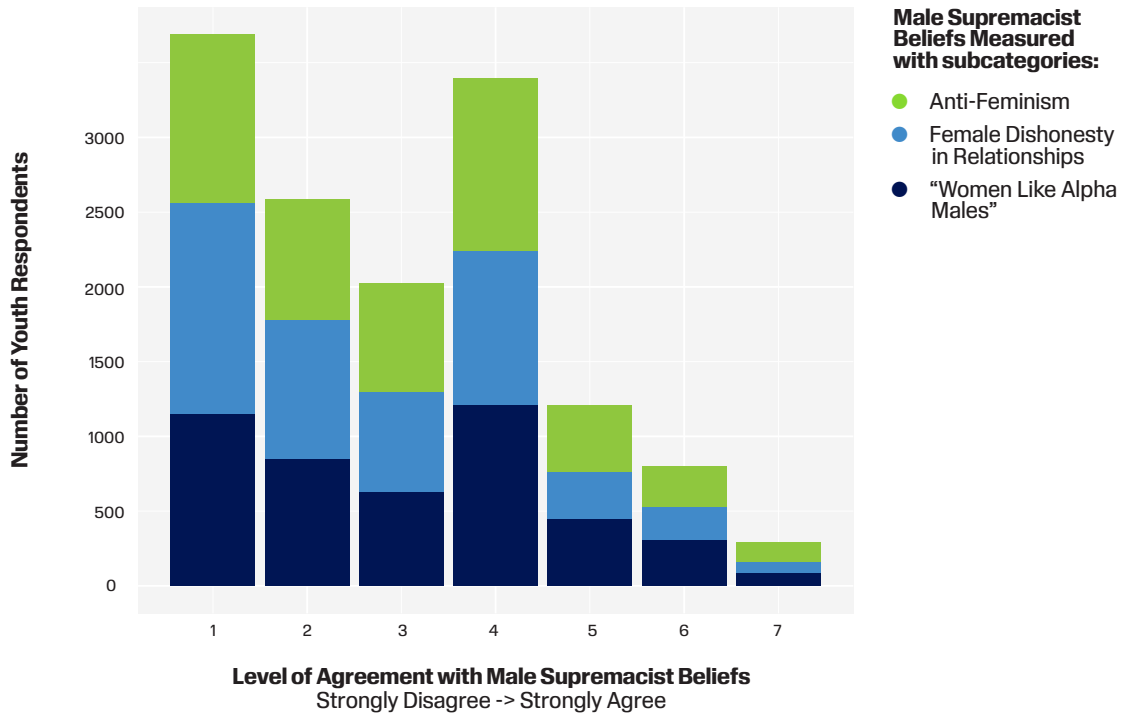
- Other than a small number of Telegram users (n = 18, average = 2.14 hours), the highest average of gun-related media hours per day were spent by participants who watch, in order: Breitbart (n = 52, average = 1.98 hours), YouTube (n = 841, average = 1.91 hours), Tik Tok (n = 658, average = 1.86 hours), Facebook (n = 888, average = 1.84 hours) and One American News (n = 37, average = 1.81 hours).
- The higher the daily hours of gun-related media exposure, the greater the post-traumatic stress scores held by participants.

- The higher the daily hours of gun-related media exposure, the greater the number of reported gun-related injuries and deaths experienced by participants.

Gun Culture as Part of Identity

- Nearly twenty-nine percent (28.62%) of youth belonged to at least one gun-related club or organization. Note this is a mix of clubs that organize around expanding gun access and those that advocate for greater gun safety.
- The average age of first shooting a gun was 14 years old. Note that from the text responses it seems participants interpreted this differently (e.g., some assumed toy/bb-guns, others assumed regular handguns, etc.).
- Youth who more strongly believed that gun culture is part of their identity (i.e. who they are as a person) tended to be younger, reported more average daily hours of gun-related media exposure, identified more strongly as Republican, held stronger male supremacist and racist attitudes and had worse anxiety/depression and post-traumatic stress symptoms. There was no association, however, with feelings of loneliness. These youth also tended to ruminate less about gun-related trauma, reporting stronger feelings of safety and less worry about school shootings.
- Youth who see gun culture as part of their identity tended to report consuming a greater number of average daily hours of gun-related media, identify as white compared to Asian, live in a non-metro area, identify more strongly as Republican and score higher on male supremacist ideation and racial resentment, controlling for the other variables in the model.**

Endorsement of Male Supremacist Beliefs in Youth (N=4,156)



Male Supremacy

- Youth with stronger male supremacist and racist attitudes tended to: hold stronger to the belief that adults in school should be armed, hold stronger to the belief that they are safer with guns than without guns and reported stronger trust in police.
- Participants who scored higher on male supremacy ideation also reported being lonelier, controlling for covariates.**
- Youth who scored higher on male supremacist ideation also reported greater post-traumatic stress, controlling for covariates.**
- The higher the number of experiences of gun-related injuries and deaths an individual had, the higher they scored on measures of male supremacy.*
- The higher the belief that guns defend minorities, the higher participants scored on measures of male supremacy.*
- The higher the belief in the Second Amendment right to overthrow the government, the higher participants scored on measures of male supremacy.*

16% of young people believe things like:

- **Women cannot help but be attracted to those who are higher in status than they are**
- **Women use feminism to gain an unfair advantage over men**
- **Modern society prioritizes women over men**
- **Men with high testosterone levels are the most attractive to women**

Symbolic (Modern) Racism

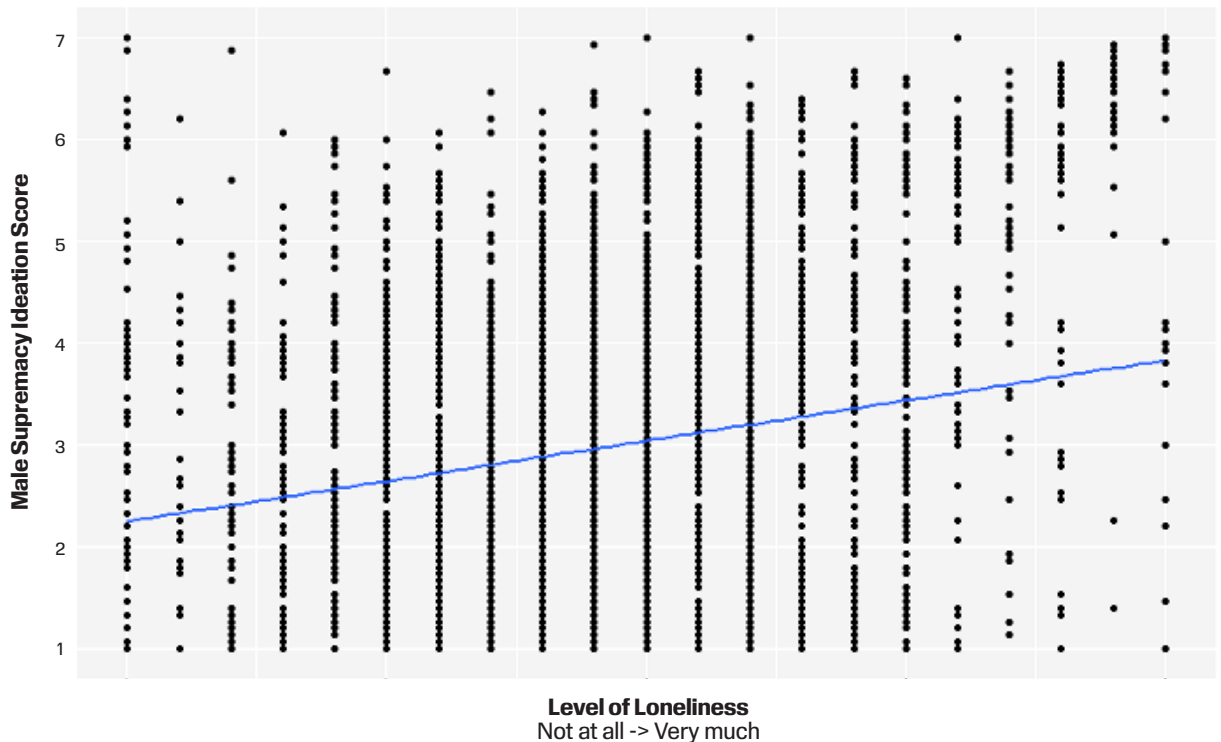
- Stronger racial resentment was weakly associated with less anxiety/depression, controlling for the other variables in this model.**
- The more strongly participants identified as Republican the higher they scored on measures of symbolic racism.*
- The more strongly participants believed that restricting gun ownership leads to fewer mass shootings, the lower they scored on measures of symbolic racism.*

Male Supremacy and Racial Resentment

- The stronger their belief that adults in schools should be armed, the higher participants scored on measures of both male supremacy and racial resentment.*
- The stronger their belief in being “safer with guns than without,” the higher participants scored on measures of both male supremacy and racial resentment.*
- The more participants trusted police, the higher they scored on measures of both male supremacy and racial resentment.*

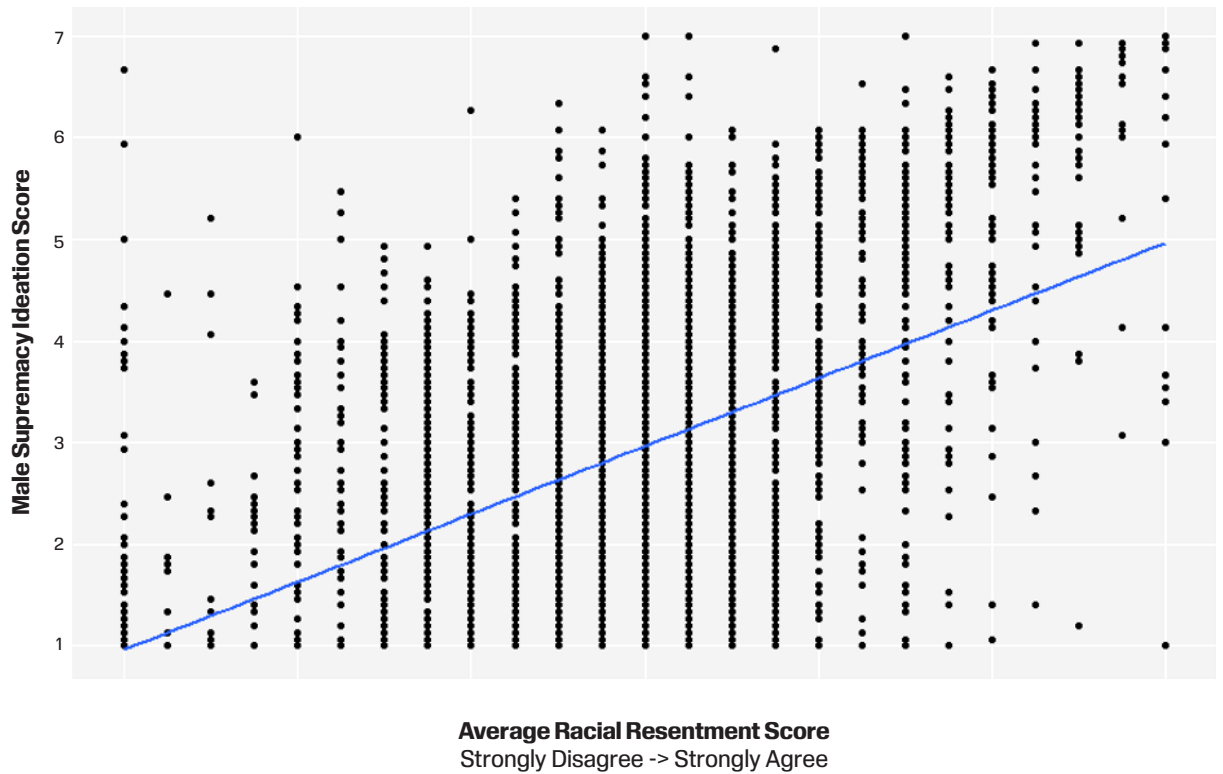
The Relationship Between Youth Loneliness and Male Supremacy (N=4,156)

Participants who scored higher on male supremacy ideation also reported being lonelier, controlling for covariates.



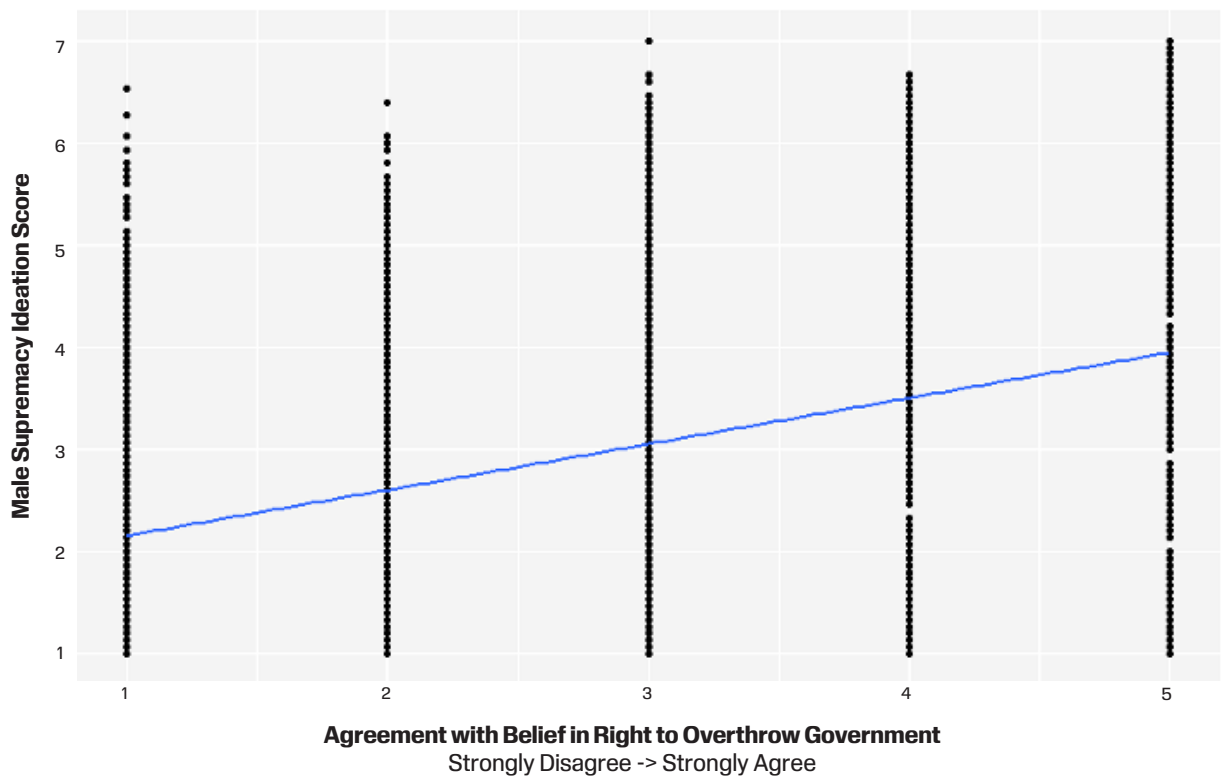
Variable	Unstandardized b (SE _{Robust})	Standardized β (SE _{Robust})	β 95% Confidence Intervals		p
			Lower Limit	Upper Limit	
Male Supremacy Score	0.19 (0.07)	.06 (.02)	.02	.10	.005

Relationship Between Male Supremacy and Racial Resentment (N = 4,156)



Relationship Between Male Supremacy and Belief in a Right to Overthrow Government (N=4,156)

Youth who agreed more with the statement, "The 2nd Amendment of the U.S. Constitution gives citizens the right to overthrow the government," tended to hold stronger male supremacist beliefs.



Mental Health and Wellness

- Older youth are lonelier, controlling for covariates.**
- Youth living in lower-income households had greater anxiety/depression and greater loneliness, controlling for the other variables in this model.**
- Youth with higher levels of post-traumatic stress (PTS) reported stronger perceptions of crime, controlling for the other variables in this model.**
- The more youth used an unhealthy form of emotion regulation (suppression of emotional expressions), the greater anxiety/depression they reported, controlling for the other variables in this model.**
- Greater anxiety/depression, greater loneliness, more self-reported average daily hours of gun-related media exposure and older age were all weakly but significantly associated with greater post-traumatic stress, controlling for the other variables in the model.
- There was a moderately strong association between experiences of gun-related injury and deaths and greater post-traumatic stress, controlling for covariates.
- Participants who identified more strongly as Democrats reported greater post-traumatic stress, controlling for the other variables in the model.**
- Controlling for the other variables in the model, youth with more PTS symptoms experienced a greater number of gun injuries and deaths,** identified as white compared to Asian, lived in a non-metro area compared to a metro area,** identified more strongly as Republican,** used cognitive reappraisal emotion regulation strategy,** scored higher on male supremacist ideation and racial resentment,** and tended to more strongly agree that they are safer with guns than without.
- Youth who ruminate about school shootings tended to have more post-traumatic stress, reported greater average daily hours of gun-related media exposure, identified as

women, identified as white compared to Asian, came from higher income households, used both types of emotion regulation more (i.e. regulate their emotions using cognitive reappraisal, as well as expressive suppression) and scored lower on male supremacist ideation and racial resentment, controlling for the other variables in the model. Associations were weak. Differences between white and Asian participants were moderate.

Gun Narratives and Gun Beliefs

- Gun narratives tested:
 - “Guns allow the weak to stand up to the strong.”
 - “People should buy guns now because society might collapse in our lifetime.”
 - “It isn’t fair that the actions of a few troubled individuals should have a negative effect on the gun rights of good Americans who have done everything right.”
 - “Guns are the best way to defend yourself, loved ones and your community.”
 - “Guns bring families together.”
- Evaluations of the above gun narratives showed that if a respondent was familiar with or agreed with one gun narrative, they were likely to be familiar with or agree with the others.
- Participants who evaluated the gun narratives more positively (familiar with, agree with, find a stronger argument) tended to be men, white non-Hispanic, identified more strongly as Republican and lived in a non-metropolitan area.
- Results suggest that older participants were more supportive of (i.e., more familiar, had stronger agreement with) gun narratives included in this study.
- Results showed that men were more familiar and/or agreed more with the gun narratives included in this study than women.

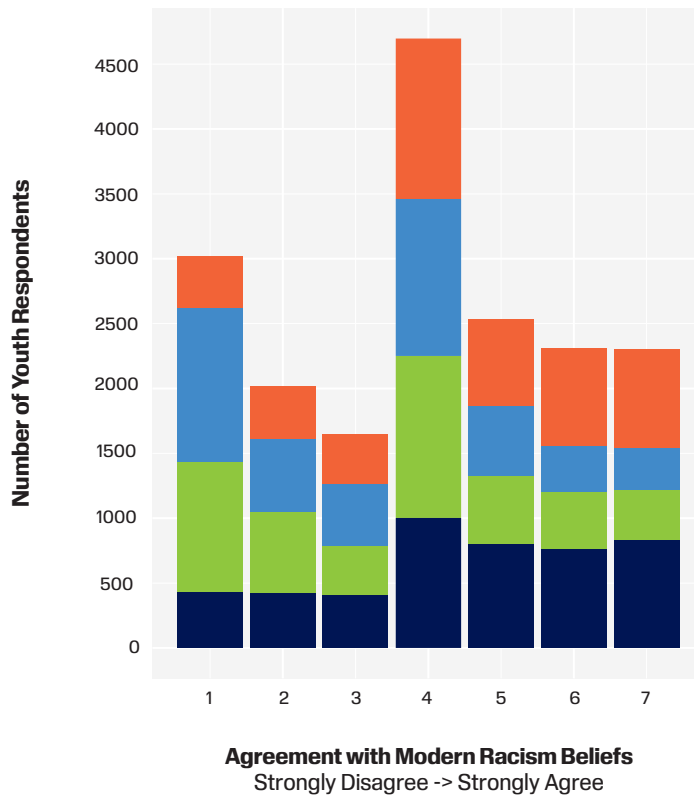
Note: “Evaluation” in the context of the gun narrative results can be defined as an average across participant familiarity, agreement and perceived argument strength for each narrative.

- Compared to participants who identified as white and non-Hispanic, participants who identified as Black non-Hispanic, Black Hispanic or as Asian-Pacific Islander non-Hispanic were less familiar and/or agreed less with the gun narrative arguments.
- Participants that identified as Republican agreed more with, and more strongly with, the gun narratives.
- Participants who live in a non-metropolitan area were more familiar, and had stronger agreement with, the gun narratives than participants who live in metropolitan areas.
- Worse mental health is associated with more positive evaluations of the following

narratives: “Guns allow the weak to stand up to the strong,” “People should buy guns now because society might collapse in our lifetime,” and “Guns bring families together.” However, worse mental health was not associated with the gun narratives about defense (“Guns are the best way to defend yourself, your loved ones and your community”), nor narratives about fairness (“It isn’t fair that the actions of a few troubled individuals should have a negative effect on the gun rights of good Americans who have done everything right”).

- Male supremacist ideation scores had some of the strongest associations with more positive familiarity, agreement and perceived argument strength of all five gun narratives.

Levels of Modern Racism in Youth (N=4,156)



Statements Tested to Measure Racial Resentment/Modern Racism

Question

- Blacks Have Gotten Less Than They Deserve (R)
- Blacks Should Try Harder
- Minorities Overcame Prejudices, Blacks Should Do the Same
- Slavery Created Difficult Conditions for Blacks (R)

Note: (R) indicates that those items are reverse-coded.

- While not among the tested gun narratives, the following gun-related beliefs were similarly salient.
 - Youth with more anxiety/depressive symptoms, who identified as white compared to Asian, identified more strongly as Republican and scored higher on male supremacy ideation and racial resentment, tended to more strongly agree that guns help minorities defend themselves, controlling for the other covariates in the model.**
 - Youth and young adults who reported a greater number of average daily hours of gun-related media exposure, who reported experiencing a greater number of gun-related injuries and deaths, who identified as white compared to Asian, who were of lower income, identified more strongly as Republican, who scored higher on male supremacist ideation and who scored higher on racial resentment tended to more strongly agree that adults in schools should be armed, controlling for the other covariates in the model.**
 - Youth and young adults who have experienced more gun-related injuries and deaths, who identified more strongly as Republican, who tended to use the worse of the two emotion regulation strategies (expression suppression) and who scored higher on male supremacist ideation and racial resentment tended to more strongly agree that the Second Amendment gives the right to overthrow the government, controlling for the other variables in the model.**

Preliminary Qualitative (Focus Group and Interview) Findings

These findings are preliminary in nature, as data collection is ongoing. Twenty-one focus groups and interviews have been held so far with 38 participants in total. We will continue to analyze qualitative data from these ongoing focus groups and interviews and flesh out findings resulting from analysis.

Feelings of Safety

Participants' feelings of safety depended on their perceptions of neighborhood safety and perceptions of geographical space as having inherent characteristics. These perceptions were often classed, racialized and also depended on the presence of law enforcement. For example, participants pointed to the quality of infrastructure (e.g., degraded sidewalks and buildings that are not "well-maintained") and the presence of unhoused people as potential indicators of danger. Participants also reported that they associated cities and metropolitan areas with more crime and gun violence. In contrast, they framed rural areas as safe places with tight-knit communities where crime is not an issue. Finally, while most participants felt that police presence increased their feelings of safety, some participants of color reported that police presence made them feel unsafe.

The Problem of Gun Violence

All participants agreed that gun violence is a problem in the U.S. and expressed the need for better gun regulation. However, participants understood the problem as stemming from the individual actions and life histories of "irresponsible" gun owners and "mentally ill" people. For instance, participants who used and owned guns constructed a binary between two social types: the "responsible" gun owner and "irresponsible" gun owner. They argued that the latter should be targets of gun regulation and almost always constructed themselves as "responsible" vis-a-vis these "bad" gun owners.

Participants also expressed the belief that "mental illness" is the source of a particular type of gun violence: mass shootings. They understood mental illness as an individual-level characteristic that can be screened

for, diagnosed and that coheres with a “scientific” logic of categories, definitions and taxonomies. They also framed “mentally ill” people as unpredictable, dangerous and prone to “snapping.” Using a psychological register, they referred to conditions such as sociopathy, post-traumatic stress disorder (PTSD), depression, anxiety and schizophrenia as potential, underlying conditions that when triggered might cause an individual to “snap.” This language of psychopathology — sociopath, PTSD, suicidal, schizophrenic — problematically reduces the antecedents to gun violence down to genetics, brain abnormality, some psychological glitch or aberration. For our participants, then, gun violence can be addressed by treating or removing a person with “mental illness” from a society with free access to guns.

When participants did refer to social factors that might shape gun violence, they pointed to poverty, absent parents and inadequate school systems in low income communities of color that socialize children into engaging in “criminal” behaviors. Such responses are classed and echo racist tropes of neglectful Black parents and a “culture of poverty” that blames victims of structural inequalities for their own marginalization.

Gun Access

Among cisgender white male participants, gun access was associated with traditional white cisgender masculinity, i.e., type(s) of masculinity that value/reproduce “traditional,” “Western” gender roles, the notion that guns are just “a way of life” in their community and the pervasive fear that anything could happen at any time. Participants who own guns, use them recreationally or otherwise feel comfortable with guns tended to be white cisgender boys/men whose fathers and grandfathers introduced them to shooting as children. When asked what activities they do/did with fathers and grandfathers, they talked about target shooting in backyards and gun ranges and hunting. Interestingly, many expressed that their mothers feared, disliked or were simply uninterested in guns and shooting.

Some white participants, regardless of gender identity, also tied geography to gun access, especially in rural areas. They expressed that since guns are a “way of life” in the communities where they live, they grew up surrounded by gun owners and users. Some participants reported that for them, this naturalized the presence and use of guns so that even if they do not currently own or use guns, they would be comfortable being around — and perhaps handling — a gun in the future.

Because we were only able to recruit relatively few participants of color (n=12 or 31.5%) and because communities of color have incredibly diverse practices and beliefs, we cannot speak definitively about gun access among Black, Latinx/a/o, Native/Indigenous, Asian/Asian-American, Pacific Islander and Mixed Race communities. Nevertheless, it is worth noting that some participants of color voiced desires to own firearms to protect themselves against “home invasions” and attacks from potentially “dangerous” people in public spaces. Moreover, the notion that guns are a “way of life” was generally absent from conversations with participants of color.

Gun Use

Participants reported that they own guns for protection, for recreational activities (e.g., hunting, sport, target shooting and collecting) and for farming/animal control, which they framed as acceptable reasons to own and use guns in contrast to using guns for “crimes” or “violence.” When asked about what threatens their safety such that they need a firearm, participants talked both about protecting personal property (e.g., against home invasions) and random attacks in public. Participants also expressed a pervasive fear that anything could happen at any time and that people should always be prepared for potential threats. Older participants who were gun owners often used this diffuse notion of threat to justify gun ownership and gun use while teens who cannot yet legally own firearms expressed the desire to do so in the future.

Experiences of Gun Violence

Participants had various experiences with gun violence. While few had been in active shooter lockdowns in institutions like schools or workplaces, some had been direct targets of gun violence, had witnessed (heard or seen) shootings or had shootings happen in their communities. Regardless of whether they experienced gun violence directly or indirectly, participants reported feelings of anxiety, grief, loss and fear. This was the case even for people who had not witnessed a shooting take place but had a shooting occur in/close to their communities (both social and geographic).

Trust in Institutions

Participants had little trust in institutions like the state and media. First, they expressed little faith in the state's ability to address issues of gun violence. Second, they characterized certain news media as "biased" and thus unreliable sources of information. They noted that media should be "objective" and that some sources are more "factual" than others. In this way, they voiced a type of epistemic individualism, characterized by the belief that individuals can — and should — come to know about the world on their own without the influence of external "opinions."

Implications & Future Directions

Methodological Implications

Investigating issues of U.S. gun violence in our current socio-political milieu warrants an approach that aims to capture the breadth and depth of thoughts, feelings and beliefs about gun use, ownership and violence. A mixed methods approach to the study of social phenomena allows us to capture that breadth and depth, as many social scientists have highlighted. Jennifer C. Greene writes that a mixed methods approach allows researchers to: 1) enhance the validity of findings; 2) produce "broader, deeper, more inclusive [knowledge] that more centrally honor the complexity and contingency of human phenomena"; 3) "unsettle the settled" using "often discordant perspectives and lenses"; 4) "[foreground] the political and value dimensions of [research]" in ways that "advance our dialogues" (Greene, 2007, p. 21). The mixed methods approach applied in this study allowed us to speak to general patterns in youth gun attitudes as they relate to safety, mental health, race and racism, masculinity and common gun narratives as well as to elaborate on the context-specific, racialized, gendered and classed circumstances from which such attitudes arise. In this sense, our study is unique within

the burgeoning field of gun studies, as there are few, if any, recent studies that approach youth attitudes towards gun violence with both quantitative and qualitative methods and that include adolescents in the sample — a critical population for understanding evolving attitudes toward gun ownership. Based on our experiences, we echo social scientists who have argued for the importance of mixed methods research in deepening and complicating our understanding of social problems affecting millions of people, albeit in different and uneven ways.

One key implication of this project's multi-phase, mixed-methods approach has been the value of studying gun attitudes through the lens of both qualitative and quantitative analysis. An extensive review of the literature reveals no known studies that have used a combination of quantitative survey instruments with a national sample of youth; qualitative, semi-structured focus groups and interviews with a national sample of youth; and analysis of digital platforms, apps and forums for understanding gun attitudes in young Americans. This mixed-methods approach provides both breadth of understanding and depth of understanding

regarding how youth think about guns, how they experience gun culture and how these relate to their mental health, their sense of safety and their political and ideological worldviews.

Each of the three types of data collection and analysis have strengths and limitations. Our quantitative survey instrument allowed us to collect data on 4,156 youths across the country, providing us information about their politics, how safe they feel in various locales (at home, at school, at work, in their neighborhood, in their state), their levels of depression, anxiety, the number of post-traumatic stress symptoms they exhibit, the degree to which they endorse male supremacist ideas, the degree to which they exhibit racial resentment, their degree of loneliness, their self-reported gun-related media consumption habits and their experience with and ability to access guns. But these data points are static. We would not know why they feel depressed, how consumption of gun-related media affected their sense of safety or which beliefs lead them to doubt government efficacy, unless we made a point of sitting down and listening to young people talk about guns in America.

Focus groups and interviews conducted with a sample of survey participants allowed us to get at the complex factors and processes shaping our quantitative findings. For instance, we found that 42% of youth can access guns easily. Through conversations with youth, we learned that they, especially white cisgender boys and men in rural areas, are introduced to guns through intergenerational bonding activities with fathers and grandfathers.

Focus groups also allowed us to glimpse the interactional processes through which people might develop and deploy their stances on guns and gun violence. We noticed that even in situations where participants perceived themselves as located on opposite poles of the U.S. political spectrum, they negotiated their perceived differences through discursive strategies which allowed them to evade direct conflict or confrontation. In linguistic anthropological terms, we might say that participants, recognizing other participants' speech as "registers," which index specific political stances and social personae, strategically aligned with each other (Agha, 2005). This analysis is preliminary, but to illustrate, there were multiple instances in which participants aligned (i.e., expressed some form of discursive agreement) with portions of fellow

participants' utterances with which they seemed to at least partially agree while simply ignoring (i.e., neither aligning or disaligning) utterances with which they seemed to disagree.

At the end of such focus groups, participants often expressed: 1) relief that they were able to engage in "civil" dialogue despite their perceived differences (indexed by certain political registers) and 2) relief that they were less further apart politically than they initially thought. These findings suggest, first, that participants value this genre of political dialogue. Second, when taken together with participants' characterizations of themselves as political moderates (i.e., skeptical of either "mainstream" political party and searching for/preferring political stances that seem less "biased" or "extreme"), we might interpret such discursive strategies as part of an attempt to construct oneself as politically reasonable vis-a-vis perceived "extremes": a good political moderate.

Of course, the academic focus group setting likely played a role in participants' discursive strategies. Early in each focus group (see "Community Guidelines" under Focus Group Protocol in Appendix D), participants were explicitly told that they would be removed from the Zoom call if they put down, insulted or attacked research staff or other participants. Given that compensation was contingent on full and active participation, participants may have deployed this genre of political dialogue to also construct themselves as good participants. Participants' perception of research staff's political stances, indexed by their questions during focus groups and the survey, might have also affected how participants negotiated political talk in this context.

What are the implications of these observations? While it is too early to say for certain, they imply that political beliefs — as they pertain to guns and gun violence — may not be as static as we think. Rather, they seem to be produced and deployed strategically in interactions with other people. In other words, a participant may have reported in the survey that they are a Libertarian, but we might interpret their response within the context of a survey where responses are limited, pre-determined and potentially contingent on whom they are speaking to and the context in which dialogue takes place.

At the same time, quantitative survey data collection allows for a breadth of information to be collected by a participant in private, without the presence of a researcher. Quantitative data analysis reveals patterns and associations in the responses and allows for language to be put to experiences, thoughts and ideas that a focus group participant may not consider or verbalize unprompted. The intentional eliciting of gun-related opinions, assessments and evaluations of arguments in survey form allows data to be generated in a number of domains that would otherwise be constrained by time in any focus group or interview context.

The quantitative portion of our study involved surveying 4,156 youth ages 14-30 across the U.S. on their attitudes and political identity; sense of safety in various environments; levels of depression, anxiety, loneliness and the number of post-traumatic stress symptoms they exhibit; their gun-related media consumption habits; the degree to which they endorse male supremacist ideas; the degree to which they exhibit racial resentment; and their experiences around gun access and use. By collecting a large, national sample of youth in the U.S., we are able to statistically determine the prevalence of self-reported mental health symptoms in the sample, what experiences youth have had shooting guns, seeing guns in school or workplace settings, their self-reported degree of loneliness, their self-reported daily hours of gun-related media exposure, their assessment of gun-related political and social issues and what associations exist among these variables, as well as the strength of those associations. Further, the survey instrument provides an expansive framework for capturing various constructs theoretically related to gun attitudes — mental health, loneliness, male supremacy, racial resentment, emotion regulation — and an ability to quantitatively assess how these constructs are related to each other.

Conceptual Implications

Analysis focused primarily on five domains of interest: 1) the ease with which young adults reported being able to access guns, 2) youth attitudes towards guns and gun-related policies, 3) how safe youth feel and how those feelings of safety relate to guns, 4) variations in type and extent of gun-related experiences for youth by political/social identity and 5) familiarity/agreement with common pro-gun narratives. Analysis from these five primary areas of interest uncovered the following overarching themes:

Ease of Access and Good Gun Owners

Our findings reveal that approximately 42% of U.S. teens and young adults report having at least somewhat easy access to a gun and further that 39% reported access to at least one gun and 11% reported access to at least four guns. With much of this access coming through parents and family members with guns in the home, young Americans do not find it difficult to get a gun in their possession and many are able to obtain multiple guns if they want.

Across the country, there is high agreement that gun violence is a problem in the U.S. (mean = 4 out of 5). All focus group participants agreed that gun violence is a problem in the U.S. and expressed the need for better gun safety regulation. However, participants constructed a binary between responsible and irresponsible gun owners, stating that only “irresponsible” or “bad” gun owners should be targeted by such regulations. Gun owners almost always constructed themselves as “responsible” or “good” gun owners who take proper safety precautions.

The Rational Moderate

The focus groups also put young people in conversation with each other, giving them the opportunity to reflect on the experiences of people from very different parts of the country with very different life experiences. It was clearly important to them to frame themselves as part of the reasonable, moderate middle. This is in juxtaposition to the perception that media and politics are polarizing and sensationalist. Being around guns and/or being raised in a culture that embraces and promotes guns or gun use puts many young people in the position of either rejecting their community mores or accepting some aspects of this culture while still defining themselves in opposition to a more intense, more committed pro-gun mentality.

This desire not to commit to either political extreme is emblematic of young people's ambivalent relationship to guns and gun culture generally. Focusing this study on minors and young adults has the benefit of assessing Americans' attitudes and beliefs at a moment in their lives where they may not have fully committed to a position on an extremely polarizing topic. Many young people are still navigating their positions on guns and are in the unique position of being central figures in narratives about school shootings and gun violence. Evidence from this study suggests that pro-gun attitudes were associated with more extreme worldviews like male supremacist ideation and racial resentment, so determining which narratives are most persuasive — which is critical for understanding how to counter both gun violence and extremist motivated violence — is a potentially effective prevention strategy for countering anti-democratic, pro-extremist ideologies, as well as potentially reducing gun violence and gun deaths.

What is Safety? What Makes Us Safe?

Feelings of safety were a theme that cut across qualitative and quantitative analysis. Youth feel safest at home (mean = 3.5 out of 4) and least safe in their state (mean = 2.5 out of 4) and at school (mean = 2.6 out of 4). Almost exactly 50% (n = 973) of our subsample of minors (i.e. less than 18 years old) reported agreement or strong agreement with the statement, "I am worried about a shooting happening at my school or a local school near me," and 58% of minors (n = 974) agreed that they, "have recently thought about what would happen if a person with a gun entered my school or a local school near me." The more an individual expressed worry about school shootings, the more they expressed worry about neighborhood shootings as well. This speaks to the profound effects that school shootings and the specter of gun violence have had on youth in America. In focus groups, participants discussed their feelings of safety being contingent on their perceptions of their neighborhood's safety. These perceptions were often classed, racialized and also depended on the presence of law enforcement.

Youth often struggled to articulate a vision of safety and safe communities beyond carceral logics and increased surveillance. Guns were cited as a source of protection, a panacea for feelings of vulnerability or fear of unpredictable people/environments. In this context, police and armed husbands-fathers were imagined as protectors in the face of "bad/irresponsible"

Evidence from this study suggests that pro-gun attitudes were associated with more extreme worldviews like male supremacist ideation and racial resentment.

gun owners, "crazy people" and "criminals." Systems-level changes to economic systems, healthcare systems and interventions to address disrupted social networks were not as frequently considered as individual-level solutions.

There is broad consensus among young people that gun violence is a problem in the United States. The question for law-makers is how to address gun violence in a way that maintains this wide-ranging support. This is where the emergent theme of safety and the ongoing need to "unpack" this notion of all its assumptions becomes crucial to future policy-making. A critical endeavor in this project has been trying to understand what safety means to our participants. Is safety a feeling? Is it real, imagined or both? Is safety a feeling that one can achieve independent of circumstances, or is it the result of a set of environmental conditions? What is the relationship between crime and safety, between feelings of vulnerability and feelings of safety? How do we make sense of suburban families living in low-crime areas feeling the need to arm themselves? And how does that square with people who experience marginalization — Black and Brown people, LGBTQ+ groups, poor people, cisgender women — who feel vulnerable in the face of material and social conditions that imperil their safety?

Gun ownership is most frequently justified by those who fear violence, crime and threat via unpredictable, bad actors. To systemically

address these feelings of fear and vulnerability, policy-makers need to address upstream causes, improve access to mental health care, reduce ease of access to firearms, address economic instability and inequality, disentangle masculinity from violence and misogyny, assuage fears of Black and Brown people invading homes/communities/country and combat conspiracy theories that promote anti-democratic and supremacist beliefs. Feeling safe in one's home or one's neighborhood requires a shift of attitude and perspective on the individual level and changes to the material conditions that affect crime rates, health care access and socio-economics on a societal level.

The consequences of not achieving this sense of safety for community members, especially children and young adults, is profound. We saw how distressed the young people in this study were. They exhibited symptoms of depression, anxiety, post-traumatic stress, loneliness and emotion dysregulation. They worried for their safety and were pessimistic about the potential for the government to address the problem of gun violence. Yet ironically, mental health was invoked both as a cause and consequence of gun violence.

Mental Illness: The Consequence and Alleged Cause of Gun Violence

The focus groups provided our research team the opportunity to better discern people's understanding of the relationship between mental illness and gun violence. Mental illness was one of many categories used to invoke a binary between those who could be responsible, good gun owners and those who would be irresponsible, bad gun owners. Mental illness emerged as an explanatory model not only on the individual level (i.e., a formally diagnosed psychopathology is the cause and reason for someone to shoot and kill classmates) but also on the level of society/government. Mental illness was understood as an individual-level characteristic that can be screened for, diagnosed and coheres to the formal scientific logics of categories, definitions and taxonomies. The language of psychopathology — sociopath, PTSD, suicidal, schizophrenic — reduces the antecedents of gun violence to simple genetic explanations, brain abnormality, some psychological glitch or other aberration. Thus, gun violence is seen as something that can be addressed by treating a mental disorder or removing a person with mental illness from a society that has free access to guns. It locates the problem within the individual, rather than

connecting mental health to a broader set of social and cultural issues, i.e., supremacist ideologies, economic deprivation, social network disruption due to urban sprawl and digitally mediated social interaction and cultural/behavioral factors that promote violence as a solution to social grievances.

But many study participants also made connections between a lack of socio-economic resources, a lack of access to quality mental health care, lack of support for “mentally ill” people, undiagnosed and untreated “mental illnesses,” and “mentally ill” people engaging in violence. This perspective still frames mental illness as a thing that a person has, an immutable characteristic of their identity which explains their bad behavior, pathologizes gun violence as something aberrant to normal human behavior and characterizes mentally ill people as unpredictable and therefore capable of any kind of (bad) behavior. Thus, an important implication of this work is that mental illness is deployed as a causal explanation for gun violence that excuses gun access and gun ownership for “normal” and “healthy” individuals, while further stigmatizing mental illness and those who would seek help for mental and emotional distress that, ironically, is frequently produced by the specter of gun violence in U.S. schools and neighborhoods.

Future Directions

There are a number of exciting and potentially ground-breaking research methods to deploy with the current dataset and future datasets related to this project. The sequential nature of the recruitment process for the qualitative portion of this project allows PERIL researchers to link the transcripts of focus group participants back to their quantitative survey responses, allowing for analysis of the text via natural language processing. This will allow researchers in our lab to connect individual survey items or survey instruments — such as scores on male supremacy or loneliness — to the words they use when answering focus group interview questions. Natural language processing allows for the analysis of emotion-words, sentiment extraction and provides a host of tools to analyze speech, which could further shed light on the connections between attitudes, politics and language used in conversations about guns in America.

Another way to analyze the existing dataset is to use structural equation modeling (SEM) and factor analysis to uncover latent factors

in the quantitative data. Combinations of responses to various survey items which measure the same underlying psychological construct could reveal new and interesting factors to analyze in relation to existing scales and items from the study. These latent factors could then be connected to the qualitative responses in order to discover even more obscure connections between the data.

Ethnographic research in schools is a logical and important next step to continue this project. Focus groups and interviews were critical to developing a holistic picture of why and how people theorize gun violence; however, observing youth in schools would provide a clearer picture of the social factors involved in gun attitude development. School ethnographies would entail PERIL researchers embedding within school communities, allow researchers to better understand local communities and see how teachers, school staff, administrators and parents contribute to the ways young people come to understand gun use and gun violence. Further, ethnographic study can complement longitudinal quantitative research by allowing us to observe how youth attitudes change over time. Young peoples' social, political and economic environments shape how perspectives about guns in the United States are formed and what social and psychological factors are involved in this process.

Finally, there is the possibility of using the analysis of the gun narratives to develop context-specific inoculation messaging. By complicating and further analyzing relationships between gun narratives and other factors, scales and items it may be possible to develop dynamic counter-messages that respond to the life phase that the person/people are in, the particular demographic intersection they inhabit or the specific psychological profile that triangulates gun attitudes, mental health symptoms and political orientation. Inoculation to gun-related propaganda is an important component of building resilience to narratives that intentionally manipulate young people, marginalized people and those who feel unsafe and vulnerable to harm. It is critical that counter-messaging takes into account regional differences, cultural differences and the particular concerns that animate a person's fear of invasion, crime or tyranny.



Conclusion

By triangulating data from three distinct phases of this study the PERIL team, in collaboration with the Southern Poverty Law Center and Everytown for Gun Safety, has formulated a comprehensive analysis of youth attitudes towards guns.

The first phase used qualitative coding and natural language processing analysis to evaluate gun narratives within digital platforms, apps and forums; the second phase was a quantitative survey using a national sample of young adults (N = 4,156) from across the country; and the third phase consisted of qualitative focus groups and interviews (n = 44) with youth ages 14-30. In summary, this study utilized a mixed-methods approach to determine and examine popular gun narratives, feelings of safety, access to firearms, experiences using or seeing guns and the relationships between mental health and gun violence.

Mental health was an expansive topic of conversation in focus groups, where individuals connected gun violence to mental illness, a lack of access to mental healthcare resources, trauma and a history of abuse. But what constituted “mental health” as a factor involved in gun violence ranged from untreated formal diagnoses like depression or PTSD, to more mental health-adjacent psychological stressors like isolation, loneliness, bullying, abuse, being raised in cities or negative environments like “bad homes.” Mental health and mental illness thus became a sort of explanatory catch-all for justifying why someone would commit a mass shooting or perpetrate violence with a firearm.

This study also revealed interesting links between people’s endorsement of male supremacist ideas and support for anti-democratic ideas, the belief that teachers should be armed in schools, the belief that they are safer with guns nearby, racial resentment and the belief that gun culture is essential to their identity. Masculinity has been intentionally invoked by pro-gun organizations and narratives, which embed patriarchal notions of man-as-protector and man-as-invoker-of-violence to link a sense of masculine identity

with possession and willingness to use firearms. A study by Scaptura and Boyle (2021) finds the connection between a “masculinity threat” and attraction to guns and endorsement of aggression. When men are unable to fulfill the “breadwinner” expectation for their families, they may turn to different means to reclaim their masculinity (e.g., a “protector” role), particularly if they endorse stereotypical masculine ideals (Warner et al., 2022). Male gun owners in focus groups stated that guns offer protection for themselves and their families, which may have also increased their feelings of confidence and control and reduced their sense of vulnerability to unpredictable violence. While it is unlikely

Mental illness is deployed as a causal explanation for gun violence that excuses gun access and gun ownership for “normal” and “healthy” individuals, while further stigmatizing mental illness and those who would seek help for mental and emotional distress.

that they will use a gun to protect their wives and children, the belief that they should be ready to do so is a critical part of how male gun owners construct their gender identity (Cassino & Besen-Cassino, 2020). The outlook is that men ought to be prepared, that they are responsible for doling out violence if need be and it is their duty as husband-father to manage threats.

Messerschmidt (1993) distinguishes various types of criminal behavior that are used to demonstrate masculinity in different contexts. The same mechanisms are also involved with guns. Young men are often told explicitly that gun ownership and gun culture confer hegemonic masculine attributes to one's identity, as these increase social desirability due to their societal reinforcement. Depending on perceived rank in the hegemonic masculine pecking order, these men may want to obtain guns in order to satisfy their particular needs within this patriarchal system. Some men may feel the need to own guns to codify their sense of self as fathers or husbands. Others may purchase guns to establish themselves as independent, self-sufficient and prepared, while still others may buy guns to responsibly safeguard their possessions ahead of a feared collapse of civilized society.

How they relate gun ownership and gun attitudes to their identity is a reflection of social conditions, media exposure and the persuasiveness of pro-gun narratives. The gun narratives derived from analysis of gun channels and digital gun content were tested against survey instruments, revealing that age and gun narrative argument evaluation are strongly related, such that older participants (18 years old or older) were more supportive (i.e., more familiar, stronger agreement) of the gun narrative arguments and provided stronger positive evaluations of the gun narrative arguments than participants under the age of 18. Further, men were more supportive of gun narratives than women, Republicans were more supportive of gun narratives than Democrats and those who lived in non-metropolitan areas (rural, suburban) evaluated the gun narrative arguments more positively and strongly than participants who lived in metropolitan areas.

While not everyone believed that the government and society are going to fall into chaos, the ability of government to address gun violence was almost universally panned by focus group participants. It is incumbent upon those working to stem the tide of gun violence in the United State to proactively instill confidence in citizens that the government can in fact address gun deaths, gun access and the upstream factors that produce violence and injury from firearms. While reducing the ease of access to guns or expanding access to quality mental health services may have an impact on gun-related suicides and homicides, it is just as important to target supremacist and anti-democratic ideologies that justify and rationalize the use of violence and the deployment of guns to facilitate that violence.

While the tangle of guns, crime, safety, fear, violence and mental illness have not been unraveled over the course of this study, this mixed-methods, multi-phase project has shed light on important social, psychological and digital factors that contribute to the knowledge development and maintenance of gun-related beliefs, ideas and attitudes. Through a collaborative partnership between three organizations, young people's thoughts, feelings and opinions about guns in the U.S. have been better illuminated.

Limitations

One important limitation to the quantitative component of this study is the correlational nature of the data. Because we did not run an experiment or track survey responses over time, we can not make any causal claims about associations among survey data items or scales.

Another limitation of the survey is that part of the teen sampling procedure was not probability-based, such that only a portion of the sample is representative of the United States (see Sample section of Appendix C). In order to sample such large numbers (N = 4,156), the research team needed to utilize multiple survey platforms, one of which was a non-probability panel.

Both the qualitative and quantitative components of the study are limited by bias in the sample. The survey is limited to people who are willing to take surveys, people who know about survey-taking platforms and those who are somewhat technologically literate. In a similar way, focus group participants are a biased sample in that they are composed only of the people who are interested in giving their time and energy to this process or whose desire for compensation outweighs the costs of time and energy. Further, listening session responses are at times biased by the presence of parents in the living space of the youth respondents. In some cases, participants had parents in the room or just outside of the room from which they were speaking to the research team.

This points to a larger problem with studying and researching youth participants: they are a potentially vulnerable group. Their parents — understandably — are interested in monitoring them, and the young people themselves are often interested in conveying to their parents that they are responsible, good, upstanding or behave in ways that reflect the positive values their parents articulated to them. Sometimes this manifested as silence about potentially controversial information, such as how easy it is to access a gun, while other times it manifested as a loud proclamation that gun safety protocols should always be followed and that gun safety is the most important thing of all. Minors and the

younger qualitative research participants also posed more difficulty opening up about their thoughts and feelings during the hour-long focus groups/interviews. Older participants were more comfortable and confident discussing gun rights, gun attitudes and politics.

Future research needs to use different methods, such as ethnography, to better capture the thoughts, feelings and beliefs of younger minors (i.e., 14-17 year olds). With only focus groups to gather qualitative data—and only a limited amount of time to speak with them all—there is less opportunity to delve into individuals' respective experiences, stories and worldview. At its best, the focus groups allow participants to converse casually with each other, build rapport with a group rather than just the facilitator and respond dynamically to other participants' responses. However, there are limits to how long one can gather a group together, and that time limit narrows the possibilities for a focus group of four or more participants. This highlights the importance of ethnographic research in addition to focus groups and quantitative methods.

Finally, this study focuses on the thoughts and feelings of American individuals, which constitutes only one component of American gun violence. Gun violence is a systemic issue, which grows from deep historical and ongoing structural injustice and predation. In both its processes and outcomes, the toll of gun violence is deeply unequal, and this inequality breaks consistently along racialized, gendered and classed lines. In future articles, we hope to ground the stories, narratives and statistical patterns we have found within these structural realities to better shed light on what participants' reported experiences accomplish — and foreclose — socially, politically and economically. Doing so is critical if we are to address American gun violence holistically.

Appendix A: Terms & Definitions

Definitions & Acronyms of Key Terms Used

Firearm – Any type of gun designed to be readily carried and used by an individual, such as a handgun, rifle or shotgun.

Gun – A broad category that encompasses firearms, as well as other types of weapons and non-weapons. A gun is any device designed, or that can readily be converted, to propel a bullet or projectile through a barrel or cylinder by means of burning propellant or by the action of an explosive. Guns can be firearms, large military weapons, air guns, nail guns, flare guns, etc.

Male Supremacy (Dashtgard, 2022) – A supremacist ideology that positions all women as fundamentally inferior to men, rationalizes and justifies patriarchy by arguing that genetic or biological differences between men and women create “naturally-ordered” societies in which men are dominant/superior and punishes men and women who step outside the patriarchal social order.

Racial Resentment Scale (Kinder & Sanders, 1996) – Measures the assessment of feelings toward Black people and respondents’ support for a secularized version of American values around the Protestant ethic. Racial resentment (1996) measures characterize animosity toward Black people as resulting from a failure to live up to American values like Protestant morality and a hard work ethic.

Perceptions of crime – The extent to which respondents feel crime is decreasing, remaining stable or increasing in their community.

PHQ – Patient Health Questionnaire (Kroenke, Spitzer, & Williams, 2001) – A short instrument used in clinical intake assessments to flag depression and anxiety symptoms.

Post-Traumatic Stress Disorder – The Primary Care Post-Traumatic Stress Disorder screen for the DSM-5 (PC-PTSD-5) – A five-item screen that was designed to identify individuals with probable PTSD in primary care settings.

Appendix B: Gun Narratives

Five narratives in favor of gun ownership were identified through an iterative process of qualitative and quantitative analysis. The codebooking phase of this project identified narrative tropes and rhetorical strategies characteristic of pro-gun media.

To accomplish this, we used quantitative language analysis to obtain a broad overview of the “surface area” of this media, identifying key terms, concepts and discursive clusters within pro-gun media. We then used complementary qualitative analysis to uncover “latent” meanings lying below that surface of the same media content. Finally, further quantitative analysis helped to predict levels of audience engagement with pro-gun media based on the narratives and rhetoric identified through the mixed-method codebooking process.

Channel Identification

Based on the field expertise of our team, we identified and assessed 68 online, pro-gun media sources. Of these, 15 channels were selected, based on the wide range, high-volume and high-engagement levels they demonstrated. These included social media and user generated content platforms Twitter, Instagram, Reddit, Facebook, 4chan and blogs. To be considered for inclusion, a channel had to meet three criteria: 1) at least 80% of the content must pertain to guns and be broadly speaking, against gun control, 2) it must have been updated at least once in the week prior to selection and 3) There had to have been at least 50 pieces of relevant content posted in the last nine months.

Procedure

Round 0

A. Quantitative. Web Scraping and Data Collection. Using R code, the posts of all 15 pro-gun channels were scraped, and each was siphoned into a data frame. Scraped data included post titles, comments and view counts where supplied. Comments were included in

tracking engagement and impact via responses to the original post (OP).

B. Qualitative. Data from the same 15 pro-gun channels were scraped and cleaned manually. The 50 most recent posts pertaining to guns were also screencapped. This screencap included the post title and post, but not comments or view counts.

Round 1

A. Qualitative. Five of the 15 channels were randomly selected for manual coding. A team of five researchers independently analyzed the 250 posts comprising this round. Using field expertise and the findings of background research, each team member examined each post individually, noting and naming salient narrative tropes and rhetorical strategies. Each team member then returned their work (in the form of an NVivo file and an Excel spreadsheet) to the study manager, who compared each analyst’s work. The study manager consolidated and refined these codes into a preliminary codebook, in the form of a list of narrative tropes, rhetorical strategies and short definitions of each narrative trope and rhetorical strategy.

B. Quantitative. This first round of quantitative data collection was informed by the categories supplied in the first round of qualitative codebooking. This step utilized all the data from Round 0a. First, post titles and comments were stripped of stop-words, (e.g., an, a, the, but, it, our), numbers and punctuation. A copy of the data frame was converted into a corpus for general keyword analysis and for possible context of narrative strategies. From this dataframe, we were able to use machine learning

to highlight common themes throughout the text. Post comments and titles were analyzed using sentiment analysis, which uses natural language processing to identify language valence (positive, neutral or negative) and strength/degree (strong, ambivalent, weak, etc.). We were able to understand how common themes interacted using language clustering, creating a hierarchical dendrogram, a language analysis technique that clusters similar terms and phrases as identified within the data.

Round 2

A. Qualitative. The hierarchical dendrogram resulting from Round 1b was incorporated into the preliminary codebook of Round 1a, further expanding the range of narratives and rhetoric, which our codebooking team analyzed in the next round of channel data. Five channels were selected at random and their 50 most recent, gun-related posts were analyzed in NVivo. The codebooking team used the preliminary codebook to analyze the posts and used these posts to test the validity of the preliminary codebook. Each coder added new and/or salient narratives and rhetorics that they noticed. They again returned their findings to the study manager, who refined and consolidated their findings into a “First Final” Codebook.

B. Quantitative. Following round 2a, we used our previously identified thematic clusters to predict engagement with these posts. Because the counts of replies and views were scraped, we simulated post engagement as number of replies per number of views. With the identified narratives on each of the 15 collected channels, we ran regressions to predict engagement based on the rhetorical strategies used. Regressions were performed on the entire dataset of all posts and comments across channels and within each channel, comparing how site users engaged with different narratives and rhetorical strategies. This provided a predictive understanding of how narratives and rhetorical strategies drive engagement.

Round 3 (Qualitative)

Round 3 was exclusively qualitative. The codebooking team analyzed the final five channels’ 250 posts, using the “Final Final” Codebook. They did so with an eye toward testing the codes in the First Final Codebook and determining what remaining narratives and rhetoric might not have been captured in any of the previous rounds. This round’s eventual outcome was “code saturation”— that is, no new information uncovered in the form of as-yet uncoded narratives or rhetoric. Once code saturation was achieved, it was established that the process of coding was complete.

Codebook

A Final Codebook was drafted, listing the most common, wide-reaching and salient narratives and rhetorics found in the selected pro-gun media channels. These codes were then ranked according to the level of engagement associated with the posts that contain them. In addition to its definition and examples, each code was accompanied by information as to the tone and tenor of comments, derived from the quantitative portion of this study.

Appendix C: Quantitative Methods

Sample

Participants were recruited from the NORC AmeriSpeak Panel. AmeriSpeak is the first U.S. multi-client household panel to combine the speed and cost-effectiveness of panel surveys with enhanced representativeness of the U.S. population, resulting in a sample retention rate higher than most other survey research firms. The AmeriSpeak Panel is a probability-based panel of over 35,000 U.S. households selected at random from across the U.S. NORC's AmeriSpeak Panel is the only panel in the U.S. that uses random door-to-door interviewing to recruit participants, who then take AmeriSpeak surveys online or by phone. As a result, AmeriSpeak retains response rates nearly three times higher than other probability panels in the U.S. Unlike typical survey research platforms where participants who already have internet access choose to opt-in, participants cannot volunteer for the AmeriSpeak Panel; rather they are chosen at random. To maximize recruitment of the subsample of interest for this study, participant recruitment was supplemented by the Lucid online panel, a non-probability online survey research panel. A total of 7,407 (ages 14-17 $n = 968$, ages 18-30 $n = 6,439$) panelists were invited to participate in the survey, and $N = 4,156$ completed the survey (ages 14-17 $n = 1,282$, ages 18-30 $n = 2,874$). Of participants who completed the survey, $n = 1,950$ came from the probability-based panel (ages 14-17 $n = 501$, ages 18-30 $n = 1,449$) and $n = 2,206$ came from the non-probability panel (ages 14-17 $n = 781$, ages 18-30 $n = 1,425$).

Total recruited unweighted $N = 4,840$

- Excluded respondents if lower than 1/3 the median survey duration time.
- Excluded respondents if skipped > 50% of relevant questions.

Final weighted $N = 4,156$

Overall Completed Units: 4,156

Age 14-17: 1,282

Age 18-30: 2,874

Probability Completed Units: 1,950

Age 14-17: 501

Age 18-30: 1,449

Nonprobability Completed Units: 2,206

Age 14-17: 781

Age 18-30: 1,425

Teens

AmeriSpeak Teen members are recruited via parents in the AmeriSpeak Panel. They reside in the same household as their parents, who are already a part of the AmeriSpeak panel. Thus, the AmeriSpeak Teen Panel has the same probability-based design as the adult household panel and is similarly representative of the U.S. population. Parents are invited to nominate and consent for their children who are 13 to 17 years of age to join the AmeriSpeak Teen Panel. The teens must live in the AmeriSpeak adult parent's home at least three months of the year. Upon receiving parental consent, NORC reaches out to the eligible nominated teens to get their consent to join the Teen Panel via physical mail pieces, phone calls and emails.

To maximize the number of interviews from the AmeriSpeak Teen Panel, all eligible age 14-17 AmeriSpeak Teen Panelists were selected for invitation to this study. To increase the total number of age 14-17 year old teens, AmeriSpeak also reached out to all active panelists who were identified as parents of a teen aged 14-17 living in the household whose teen had not joined the AmeriSpeak Teen Panel. Due to the sensitive nature of the survey, the parent panelists for all teens were first contacted to provide consent for their teen to participate in the study. The parent panelists were provided with general information about the study and given the opportunity to provide consent for AmeriSpeak to contact their teen(s). Once the parent provided consent for their teen(s) to participate in the study, AmeriSpeak reached out to the teen, randomly selected among all eligible within the household, with an invitation to the study. Parents were offered the cash equivalent of \$1 for completing the parent consenting survey.

The AmeriSpeak Panel sample was supplemented with respondents from Lucid's non-probability online opt-in panel. Lucid pre-screened parent panelists on their panel to identify a 14-17 year old teen respondent in the household. Again, due to the sensitive nature of the survey the Lucid parent panelists were provided with general information about the study and given the opportunity to provide consent for their teen to participate. Once parental consent was provided, the teen was then connected to the survey hosted by AmeriSpeak. AmeriSpeak gathered general demographics from the Lucid teen before they were connected to the main survey hosted by Qualtrics.

Young Adults

AmeriSpeak Panel recruitment is a two-stage process: 1) initial recruitment using U.S. Postal Service (USPS) mailings, telephone contact and modest incentives and 2) a more elaborate NRFU recruitment using FedEx mailings, enhanced incentives and in-person visits by NORC field interviewers. For the initial recruitment, sample households are invited to join AmeriSpeak online by visiting the panel website AmeriSpeak.org or by calling a toll-free telephone line (inbound/outbound supported). Both English and Spanish languages are supported for online and telephone recruitment. The initial recruitment data collection protocol features the following: an over-sized pre-notification postcard, a USPS recruitment package in a 9"x12" envelope (containing a cover letter, a summary of the privacy policy, FAQs and a study brochure), two follow-up postcards and contact by NORC's telephone research center for sample units with a matched telephone number.

For the second stage NRFU recruitment, a stratified random sample is selected from the nonrespondents of the initial recruitment. Units sampled for NRFU are sent a new recruitment package by FedEx with an enhanced incentive offer. Shortly thereafter, NORC field interviewers make personal, face-to-face visits to the pending cases to encourage participation. Once the households are located, the field interviewers administer the recruitment survey in-person using Computer-Assisted Personal Interviews (CAPI) or encourage the respondents to register online or by telephone.

A general population, age 18 to 30 sample was selected from NORC's AmeriSpeak Panel and from Lucid non-probability panel for this study. The sample was drawn from the AmeriSpeak

Panel using sampling strata based on age, race/Hispanic ethnicity, education and gender (24 sampling strata in total). Sample selection takes into account the expected differential survey completion rates across the sampling strata. The size of the selected sample per stratum is determined such that the distribution of the complete surveys across the strata matches that of the target population as represented by census data. If a panel household has more than one active adult panel member, only one adult panel member is selected at random. When panelists are selected for an AmeriSpeak survey, the selection process within each sampling strata favors those who were not selected in the most recent previous AmeriSpeak survey. This selection process is designed to minimize the number of surveys any one panelist is exposed to and maximize the rotation of all panelists across AmeriSpeak surveys.

For the non-probability sample, quota buckets were defined for demographic strata to reflect known population distributions and worked with the sample provider to slowly release samples over the field period to adequately fill each.

If invited, AmeriSpeak panelists can take the survey online through the password-protected AmeriSpeak Mobile App, the password-protected AmeriSpeak Web portal or by following a link in the email invitation sent to them. To encourage study cooperation, NORC sent the initial invitation and email reminders to sampled web-mode adult panelists age 18-30 on the following dates:

- Friday, Sept. 28, 2022
- Tuesday, Oct. 1, 2022
- Wednesday, Oct. 12, 2022

AmeriSpeak teens age 14-17 who gained parental consent and were invited to the survey were sent email reminders at the following days after receiving the initial invite: 2, 6, 9, 12, 15, 18, 21 and 23 days post-invite. SMS or text messages were sent to those invited panelists who had agreed to receive such messages on Sunday, Oct. 9, 2022.

Adult panelists age 18-30 were offered the cash equivalent of \$5 and AmeriSpeak teens age 14-17 were offered the cash equivalent of \$8 for completing this survey. The incentive provided to non-probability sample participants is unknown to us. The method for incentivizing survey completion does not necessarily involve reminders. Since probability is not involved, a

higher response rate is not relevant for a non-probability sample.

Data Preprocessing and Quality Review

For quality control, NORC removed 156 cases from the final set of completed interviews based on three cleaning criteria noted below with counts (counts are overlapping):

- Removing Speeders (i.e., those that completed the survey in less than one-third the median duration): 139 removed for speeding.
- Removing Respondents with High Refusal Rates (i.e., those that skip or refused more than 50% of the eligible questions): 42 removed for high refusal rates.
- Removing Straight-liners (i.e., those that straight-lined eligible grid item questions): 15 were removed for straight-lining all question grids shown to respondents.

AmeriSpeak is a probability-based panel. PERIL selected which respondents were allowed to join. Selected panelists control their own access to surveys via secure log-in to a web portal or app. E-mails, text invitations or interview-operated telephone calls go directly to the address/number of the recruited panelist. When contacted via phone, the panelist is requested by name. AmeriSpeak programs its surveys and invites panelists using methodologies that ensure panelists cannot take the survey more than once, and each panelist is identifiable only with a unique ID. For these reasons, AmeriSpeak is free of “bots,” fabricated profiles, non-invited respondents or individuals or members of the household repeatedly and illegitimately taking the same survey.

In addition to the above cleaning, Lucid adult and teen cases were removed from the final set of completed surveys due to an error in which a sample was initially loaded on Lucid’s program. The cases were not properly linked to Lucid’s panel and therefore Lucid was not able to confirm that the cases were valid. In total, an additional 122 cases were removed from the final dataset, 102 adults and 20 teens.

The median survey duration was 13 minutes.

Survey Weighting

The final weights are developed through three stages. First, probability and non-probability sample weights are developed separately. Second, small area estimation is leveraged to model core estimates of the survey within the nonprobability sample. Finally, the two samples are combined to create the final weights. These final two stages make up NORC’s TrueNorth® Calibration. More on TrueNorth Calibration can also be found here: amerispeak.norc.org/us/en/amerispeak/our-capabilities/truenorth.html.

Stage 1: Core Probability and Non-probability Weights

There are four unique steps to the development of core probability weights and two for core non-probability weights. The four core probability weight steps are as follows:

AmeriSpeak Panel Weight

Since the sampling frame for the probability sample is the AmeriSpeak Panel, which itself is a sample, the starting point of the weighting process for the study is the AmeriSpeak panel weight. To develop the panel weight, NORC first computed the panel base weight as the inverse of the probability of selection from the NORC National Frame (the sampling frame that is used to sample housing units for AmeriSpeak) or other address-based sample frames (supplemental panel samples were selected from frames developed from the USPS Delivery Sequence Files). The sample design and recruitment protocol for the AmeriSpeak Panel involve unequal sampling rates across sampling strata and additional subsampling of initial nonresponding housing units for in-person nonresponse follow-up (NRFU). The panel base weight reflects all the variations in panel sample selection probabilities. For AmeriSpeak teen respondents ages 14-17, the panel weights are taken from the nominating AmeriSpeak panelist parent.

Variables and Categories for Panel Recruitment Non-Response Ranking:

- Age: 18-24, 25-29, 20-30, 40-49, 50-59, 60-64 and 65+.
- Gender: Male and Female.
- U.S. Census Division: New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain and Pacific.

- Race/Ethnicity: Non-Hispanic White, Non-Hispanic Black, Hispanic and Non-Hispanic Other.
- Education: Less than High School, High School/GED, Some College and BA and Above.
- Housing Tenure: Home Owner and Other.
- Household phone status: Cell Phone-only, Dual User and Landline-only/Phoneless
- Age x Gender: 18-34 Male, 18-34 Female, 35-49 Male, 35-49 Female, 50-64 Male, 50-64 Female, 65+ Male and 65+ Female.
- Age x Race/Ethnicity: 18-34 Non-Hispanic White, 18-34 All Other, 35-49 Non-Hispanic White, 35-49 All Other, 50-64 Non-Hispanic White, 50-64 All Other, 65+ Non-Hispanic White and 65+ All Other.

These population benchmarks were obtained from the Current Population Survey, except for Household Phone Status, which was determined by the National Institutes of Health biannual survey on wireless substitutions.

Probability Base Weight

The AmeriSpeak Panel Weight is then adjusted to account for the sample selection probability from the panel under the study sample design. The base weight is a product of the AmeriSpeak Panel Weight and the inverse of selection probabilities associated with sample selection from the panel.

Nonresponse Adjusted Probability Weight

The nonresponse adjusted weight is created by adjusting the base weights for nonrespondents to compensate for nonrespondents within nonresponse weighting classes defined by age, race/ethnicity, gender and education. Within each weighting class, the nonresponse adjusted weight is the product of the base weight and the inverse of the weighted response rate.

Probability Weight

The nonresponse adjusted weight calibrated to population benchmarks through raking ratio adjustments. For the nonprobability sample cases, the raking adjustments are applied to their base weights. The raking variables are detailed after the description of the core nonprobability weight.

The two nonprobability sample weights are developed in the following stages:

Non-probability Base Weight

There are no known probabilities of selection for nonprobability sample cases. As such it is common in other hybrid (probability and nonprobability) sample combination schemes to simply give nonprobability cases a base weight of 1. Under TrueNorth, the nonprobability sample weights are developed through statistical matching and propensity weighting. Statistical matching involves matching each nonprobability sample unit to one or more probability sample units based on a set of matching variables. The matching process divides the probability sample into two sets: the set of units matched to the nonprobability sample unit and the set not matched. The matched set is then used as a reference sample to develop the propensity weights for the nonprobability sample units. Propensity weighting is carried out in the following steps: 1) concatenate the matched probability sample and the nonprobability sample, 2) create a dichotomous indicator variable, 1 for nonprobability sample units and 0 for matched probability units, 3) fit a logistic regression model to predict the probability of inclusion for the nonprobability sample units and 4) weight the nonprobability sample unit as the reciprocal of the predicted probabilities.

Non-probability Weight

The base weight is then ranked to the same population benchmarks as those used for ranking the probability sample.

Probability and Non-probability Ranking Targets

The benchmarks use for ranking both probability and nonprobability samples are as follows:

- Age x Gender: 14-15 Male, 14-15 Female, 16-17 Male, 16-17 Female, 18-24 Male, 18-24 Female, 25-30 Male and 25-30 Female.
- Age x Race/Ethnicity: 14-15 Non-Hispanic White, 14-15 Non-Hispanic Black, 14-15 Hispanic and 14-15 Non-Hispanic Other, 16-17 Non-Hispanic White, 16-17 Non-Hispanic Black, 16-17 Hispanic and 16-17 Non-Hispanic Other, 18-24 Non-Hispanic White, 18-24 Non-Hispanic Black, 18-24 Hispanic and 18-24 Non-Hispanic Other, 25-30 Non-Hispanic White, 25-30 Non-Hispanic Black, 25-30 Hispanic and 25-30 Non-Hispanic Other.

- Age x Region: 14-15 West, 14-15 Northeast, 14-15 Midwest, 14-15 South, 16-17 West, 16-17 Northeast, 16-17 Midwest, 16-17 South, 18-24 West, 18-24 Northeast, 18-24 Midwest, 18-24 South, 25-30 West, 25-30 Northeast, 25-30 Midwest, 25-30 South.
- Age x Parent's Education (age 14-17): 14-15 Less than High School, 14-15 High School/GED, 14-15 Some College and 14-15 BA and Above, 16-17 Less than High School, 16-17 High School/GED, 16-17 Some College and 16-17 BA and Above.
- Age x Education (age 18-30): 18-24 Less than High School, 18-24 High School/GED, 18-24 Some College and 18-24 BA and Above, 25-30 Less than High School, 25-30 High School/GED, 25-30 Some College and 25-30 BA and Above.
- Race/Ethnicity x Gender: Non-Hispanic White Male, Non-Hispanic White Female, All Other Male, All Other Female.

These population benchmarks were obtained from the Current Population Survey. Any extreme weights are trimmed based on a criterion of minimizing the mean squared error associated with key survey estimates.

Stage 2: TrueNorth Small Domain Modeling Calibration

At the core of the TrueNorth calibration method is a small area modeling procedure conducted in the following steps:

1. First, identify a set of four key response variables from the survey using a machine learning approach called gradient boosted tree modeling. This method is used to identify the key response variables that are associated with the largest bias in the non-probability sample and also are highly correlated with other response variables.
2. Define a set of domains in the data, where each domain is a specific, relevant subgroup for data analysis and reporting. The domains used for this study are Race/Ethnicity (3), Education — age 18-30 only — (2), Age (3) and Gender (2). Overall, then, this study used 10 unique domains.
3. Fit domain-level small area models for each of the response variables identified earlier using the weighted probability sample and nonprobability sample domain-level

estimates as input. These estimates are weighted estimates where the weights are the final probability and nonprobability weights, respectively. The model included covariates, domain-level random effects and sampling errors. The covariates were external data available from the American Community Survey (ACS).

4. The fitted small area models provide predicted values for each domain and for each response variable, which are then used for the final weighting step described below.

Stage 3: Final Combined Study Weight

The final combined probability and nonprobability sample weight was derived by ranking both sampled together, using the same benchmarks for age, gender, division, race/ethnicity, education, housing tenure and household phone status noted earlier, plus the predicted values for each domain for each response variable modeled in the small area modeling process.

Sampling Margin of Error

Under NORC's trademarked TrueNorth calibration, combined probability and nonprobability sample weights yield approximately unbiased population estimates. The margins of error reported here reflect the sampling variation of the probability sample as well as the TrueNorth model-assisted calibration procedures that generate the combined sample weights. As such, it is reasonable for analysts using this data to employ standard methods for approximating margins of error and statistical significance, although there is currently no statistically agreed upon approach to variance estimation when utilizing nonprobability samples.

Age 14-30:

- Study design effect: 1.62%
- Study margin of error: +/- 2.08%

Age 14-17:

- Study design effect: 1.89%
- Study margin of error: +/- 4.06%

Age 18-30:

- Study design effect: 1.51%
- Study margin of error: +/- 2.42%

Procedure

After completing consent, participants were directed to a link to the survey research platform Qualtrics where they completed the survey.

At the end of the survey, participants were invited to participate in follow-up focus group interviews (see Qualitative Methods below).

Measures

Gun Narratives (Arguments) Evaluation

The Narratives derived from the codebook were presented in a question matrix in random order to participants. The narratives were: “Guns allow the weak to stand up to the strong,” “People should buy guns now because society might collapse in our lifetime,” “It isn’t fair that the actions of a few troubled individuals should have a negative effect on the gun rights of good Americans who have done everything right,” “Guns are the best way to defend yourself, your loved ones and your community” and “Guns bring families together.” We must emphasize that not all of these narratives are inherently problematic. Some are more inherently problematic than others, and some are only problematic when exaggerated to the extreme. These narratives must be assessed both in terms of quality and context in order to determine the point at which they may become destructive.

Familiarity. Participants rated the extent to which they are familiar with each argument, with response options 0 (*Not at all familiar*), 1 (*A little familiar*), 2 (*Somewhat familiar*), 3 (*Familiar*) and 4 (*Very familiar*).

Agreement. Participants rated the extent to which they agree with each argument, with response options 1 (*Strongly disagree*), 2 (*Disagree*), 3 (*Neither agree nor disagree*), 4 (*Agree*), 5 (*Strongly agree*).

Perceived Argument Strength. Participants judged how weak or strong they find each argument, with response options 1 (*Very weak argument*), 2 (*Somewhat weak argument*), 3 (*Neither weak nor strong argument*), 4 (*Somewhat strong argument*) and 5 (*Very strong argument*).

Narrative Composite Evaluations. Argument familiarity, agreement and perceived argument strength were averaged together for each narrative to create a composite gun narrative evaluation index. These composite indices showed acceptable reliability, Cronbach’s α ranged from .73 to .78.

Gun Narrative Evaluation Index. An overall gun narrative composite evaluation index was computed by averaging across familiarity, agreement and perceived argument strength across the five gun narratives. Higher scores =

more positive evaluations of the gun narratives. The overall evaluation index showed good reliability, Cronbach’s α = .89. A factor analysis was conducted using the *sem* function in Stata version 17 (StatCorps, 2021). Results showed that all 15 items significantly loaded onto a single factor, λ loadings ranged from .42 to .75, all p-values < .001, standardized root mean squared residual (SRMR) = .119, coefficient of determination (CD) = .903. Results suggest that 90% of the variance in the latent factor gun argument evaluation was explained by the 15 gun narrative items.

Gun Attitudes

Fourteen gun attitudes items were presented to participants in random order. Participants rated the extent to which they agree or disagree with each item, with response options 1 (*Strongly disagree*), 2 (*Disagree*), 3 (*Neither disagree nor agree*), 4 (*Agree*) and 5 (*Strongly agree*). The items included: “I am safer with guns around than without guns around,” “Guns are an effective way for people from marginalized and minority groups to defend themselves,” “Adults in schools (e.g., K-12 teachers/administrators) should be armed with guns,” “The Second Amendment of the U.S. Constitution gives citizens the right to overthrow the U.S. government,” “I am worried about a shooting happening at my school or a local school near me,” “I am worried about a shooting happening in my neighborhood,” “I have recently thought about what would happen if a person with a gun entered my school or a local school near me,” “Gun violence is a problem in the U.S.,” “Gun control laws in the U.S. should be stricter than they are today,” “Restricting gun ownership will lead to fewer mass shootings,” “Assault weapons should be banned in the U.S.,” “The U.S. government is trying to restrict our freedoms,” “I trust the police to keep me and my family safe” and “Gun culture is a part of my identity (i.e., who I am as a person)”.

Gun Experiences

Gun-Related Organizations. Participants were provided with a checklist of 13 clubs and organizations shown in random order and were asked to check all that they are a part of. These included Second Amendment Foundation, 4-H, a local shooters/hunters association, Boy Scouts of America, Firearms Policy Coalition, Gun Owners of America, March for Our Lives, National Association for Gun Rights, National Rifle Association, ROTC, Students Demand Action, Everytown for Gun Safety and Other (please specify).

Gun Knowledge. Participants were asked, “How much do you know about gun safety?” and “How confident are you in handling a gun?” each with response options 0 (*Not at all*), 1 (*A little bit*), 2 (*Somewhat*), 3 (*Quite a bit*) and 4 (*A lot*).

Gun Experiences. Participants were asked how many times, in general, they have: “Been to a shooting range?” “Participated in an active shooter drill (e.g., at school, work)?” “Been in a live active shooter lockdown?” “Saw a classmate / coworker bring a gun to school / work?” and “Saw a classmate / coworker bring a weapon other than a gun to school / work?” Participants responded to each item with 0 (*Never*), 1 (*Once*), 2 (*2 to 3 times*) or 3 (*4 or more times*).

Participants were asked whether they have ever shot a gun, with responses 0 (*No*) and 1 (*Yes*). Those who indicated *Yes* were then asked a follow up question: “How old were you when you first shot a gun? (Please input a number. If you are unsure, give your best guess.)” They then input a numerical value in a free-response text box.

Gun Access. Participants were asked how easy or difficult it is for them to access a gun, with response options 1 (*Very easy*), 2 (*Somewhat easy*), 3 (*Neither easy nor difficult*), 4 (*Somewhat difficult*) and 5 (*Very difficult*).

Number of Guns. Participants were asked how many guns they have access to and input a numerical value into a free-response text box.

Future Gun Access. Participants who indicated they had access to no guns (i.e. a 0 input for the number of guns item) were then asked whether they will have access to a gun in the future, with response options 0 (*No*) and 1 (*Yes*).

Gun Access Reasons. Participants who indicated they have access to any number of guns greater than zero were asked the follow-up item of how they have access to these guns, with a check-all-that-apply checklist including: “Bought myself,” “Given to me as a gift,” “Inherited from family,” “My parent(s) or guardian(s) own(s) the gun(s),” “Belongs to someone else (other than my parent/s or guardian/s) in my household,” “Belongs to someone else (other than my parent/s or guardian/s) outside of my household” and “Other (please specify.)”

Gun Types. Participants who indicated they have access to any number of guns greater than zero were asked the follow-up item of what

type of gun(s) they have access to, with check-all-that-apply response options “Handgun,” “Shotgun,” “Bolt-action rifle,” “Lever-action rifle,” “Semi-automatic rifle,” “Other (please specify)” and “I’m not sure.”

Gun Use Frequency. Participants who indicated they have access to any number of guns greater than zero were asked the follow-up item of how often they use guns, with response options 0 (*Never*), 1 (*Rarely*), 2 (*Sometimes*), 3 (*Frequently*) and 4 (*All the time*).

Gun Use Reasons. Participants who indicated they have access to any number of guns greater than zero and also indicated they use guns at least rarely (at least a 1 or greater on the gun use frequency item) were asked a follow-up item for what reason(s) they use guns. Response options consisted of a check-all-that-apply list: “Personal safety/ protection,” “Hunting,” “Recreation / sport,” “Antique / family heirloom / pass down,” “Second Amendment right,” “Protection from the government,” “Have always owned / raised with guns / family tradition,” “Like guns / wanted one,” “Collect guns / hobby,” “Animal / pest control,” “Other (please specify)” and “No reason in particular.” Participants who indicated they never use guns (a 0 for never on the gun use frequency item) were asked the same question and response options but worded as for what reason(s) they would use guns. Participants were asked how often they show off gun(s) on 1) social media and 2) In person to friends. Each of these was measured with response options 0 (*Never*), 1 (*Rarely*), 2 (*Sometimes*), 3 (*Frequently*) and 4 (*All the time*).

Perceptions of Safety

Feelings of Safety. Participants were asked how safe they feel in their home, school (*if applicable*), work (*if applicable*), neighborhood and state. For each environment, participants responded with either 0 (*Not at all*), 1 (*A little*), 2 (*Somewhat*), 3 (*Quite a bit*), 4 (*Very much*) or *Does not apply*.

Perceptions of Crime. Participants were asked the extent to which they feel crime is decreasing, remaining stable or increasing. To respond, they were presented with a slider bar on a number line that ranged from -10 (*crime decreasing*) to 0 to 10 (*crime increasing*).

Self-Reported Media Exposure

Gun-Related Media. Participants were provided a list of 32 common news media sources and asked to select the top three that

they use for news and information about gun violence. Response options included: “ABC News,” “Associated Press,” “BBC,” “Breitbart,” “Buzzfeed,” “CBS,” “CNN,” “Discord,” “Facebook,” “Fox News,” “Huffington Post,” “Instagram,” “LA Times,” “MSNBC,” “NBC,” “NPR,” “NY Times,” “Newsmax,” “One American News,” “PBS,” “Reddit,” “Reuters,” “Snapchat,” “Telegram,” “Tik Tok,” “Twitch,” “Twitter,” “USA Today,” “Wall Street Journal,” “Washington Post,” “WhatsApp,” “YouTube,” “Other (please specify)” and “None of the above.” Participants who selected “None of the above” were unable to select any other options.

Average Daily Hours of Gun-Related Media.

The three news media options chosen in the gun-related media question (if “None of the above” was not chosen) were then piped into a follow-up question that asked “For each of the sources you selected, please use the scale provided to indicate the extent to which you used each source for information about news about gun violence in the past week.” The three news media sources chosen in the previous item were then presented and participants rated each one with response options 0 (*Not at all* (0 hours)), 1 (*Just a little* (< 1 hour)), 2 (*Some* (1-3 hours)), 3 (*Quite a bit* (3-6 hours)) or 4 (*A great deal* (6+ hours)).



Mental Health

Anxiety and Depressive Symptoms. Anxiety and depressive symptoms were measured using four items from the Patient Health Questionnaire (PHQ; Kroenke et al., 2001). Participants were presented with four socio-emotional health problems and asked to indicate, for each one, how often they have been bothered by the problem in the past week. The items included “Little interest or pleasure in doing things,” “Feeling down, depressed or hopeless,” “Feeling nervous, anxious or on edge” and “Not being able to stop or control worrying.” Participants responded to each one with response options 0 (*Not at all*), 1 (*Several days*), 2 (*More than half the days*) or 3 (*Nearly every day*). These items were averaged together to create a composite PHQ index, which showed acceptable reliability, Cronbach’s $\alpha = .90$. The four items were chosen from the larger PHQ based on face validity.

Post-Traumatic Stress (PTS) Symptoms.

Post-traumatic stress (PTS) symptoms were measured using the Primary Care Post-Traumatic Stress Disorder Screen for DSM-5 (PC-PTSD-5; Prins et al., 2015). Participants were asked how often over the past week they experienced the following: “Had nightmares about gun violence or thought about it when you did not want to?” “Tried hard not to think about gun violence or went out of your way to avoid situations that reminded you of it?” “Been constantly on guard, watchful or easily startled?” “Felt numb or detached from people, activities or your surroundings?” and “Felt guilty or unable to stop blaming yourself or others for gun violence or any problems it may have caused?” Participants responded to each item with the response options 0 (*Never*), 1 (*Rarely*), 2 (*Sometimes*), 3 (*Often*) or 4 (*All the time*). These five items were averaged together to create a PTS composite index, which showed good reliability, Cronbach’s $\alpha = .89$.

Loneliness. Loneliness was measured using the De Jong Gierveld Loneliness Scale (de Jong Gierveld & van Tilburg, 1999). Participants were presented with six statements and asked to rate the “extent to which they apply to your situation, the way you feel now,” with response options 1 (*Strongly disagree*), 2 (*Somewhat disagree*), 3 (*Neither agree nor disagree*), 4 (*Somewhat agree*) and 5 (*Strongly agree*). The statements included: “I experience a general sense of emptiness,” “There are plenty of people I can rely on when I have problems,” “There are many people I can trust completely,” “I miss having people around

me,” “There are enough people I feel close to” and “I often feel rejected.” The second, third and fifth items were reverse-scored, then all six items were averaged together to create a composite loneliness index, which showed acceptable reliability, Cronbach’s $\alpha = .71$.

Emotion Regulation. Emotion regulation was measured using the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003). Participants were instructed: “We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please indicate the extent to which you disagree or agree.” Participants were then presented with five statements and rated each with response options 1 (*Strongly disagree*), 2 (*Somewhat disagree*), 3 (*Neither agree nor disagree*), 4 (*Somewhat agree*) and 5 (*Strongly agree*).

The ERQ measures two constructs (i.e., types of emotion regulation — cognitive reappraisal and expressive suppression) with a subscale for each. The first is cognitive reappraisal. Three items from the ERQ Cognitive Reappraisal Subscale were used: “When I want to feel more positive emotions, I change what I’m thinking about,” “I control my emotions by changing the way I think about the situation I’m in” and “When I want to feel less negative emotions, I change the way I’m thinking about the situation.” These three items were averaged together to create a cognitive reappraisal emotion regulation composite index, which showed acceptable reliability, Cronbach’s $\alpha = .77$. The second construct is expressive suppression. Two items from the ERQ Expressive Suppression Subscale were used: “I keep my emotions to myself” and “I control my emotions by not expressing them.” These two items were averaged together to create an expressive suppression composite index, which showed acceptable reliability, Cronbach’s $\alpha = .77$. All items were chosen from the larger ERQ based on face validity.

Ideological and Attitudinal Worldviews

Political Identity. Participants were asked the extent to which they identify as Democrat or Republican, with response options 1 (*Strong Democrat*), 2 (*Democrat*), 3 (*Lean Democrat*), 4 (*Neither Democrat nor Republican / Don’t know / Not sure*), 5 (*Lean Republican*), 6 (*Republican*) and 7 (*Strong Republican*). Participants were also asked whether they identify as Libertarian, with response options 0 (*No*) and 1 (*Yes*).

Feeling Thermometers. Participants were presented with a series of seven slider bars with the instructions, “Using the sliders below, please rate how much you feel about each of the following people. Lower numbers mean that you feel more unfavorably, whereas high numbers mean that you feel more favorably. Please click and drag the slider to the number that best represents how you feel.” Each slider bar posed the question “How do you feel about ___ in general?”, ranged from 0 (*Very unfavorable*) to 100 (*Very favorable*) and included a checkbox option for *Not familiar / Never heard of them*. The seven slider bars corresponded to one for each of the following: Joe Biden, Donald Trump, Democrats, Republicans, the National Rifle Association, March For Our Lives and guns.

Male Supremacy. Male supremacist ideology was measured using a scale developed and validated by PERIL’s Director of Research Pasha Dashtgard, Ph.D. Participants rated the extent to which they disagree or agree with the scale’s 15 statements, with response options 1 (*Strongly disagree*), 2 (*Disagree*), 3 (*Somewhat disagree*), 4 (*Neither disagree nor agree*), 5 (*Somewhat agree*), 6 (*Agree*) and 7 (*Strongly agree*). Participants were instructed: “The statements include items such as: “Feminism is about hating men,” “Women have a biological drive to cheat on their partners” and “Men with high testosterone levels are the most attractive to women.” The 15 items were averaged together to create a composite male supremacist ideology score, which showed excellent reliability, Cronbach’s $\alpha = .96$.

Racial Resentment Scale. Racist ideation was measured using the *Racial Resentment Scale* (Kinder & Sanders, 1996). Participants were presented with four statements and asked to rate the extent to which they disagree or agree with each, with response options 1 (*Strongly disagree*), 2 (*Disagree*), 3 (*Somewhat disagree*), 4 (*Neither agree nor disagree*), 5 (*Somewhat agree*), 6 (*Agree*), 7 (*Strongly agree*). The statements included: “Irish, Italian, Jewish and many other minorities overcame prejudice and worked their

way up. Blacks should do the same without any special favors,” “Generations of slavery and discrimination have created conditions that make it difficult for Blacks to work their way out of the lower class,” “Over the past few years, Blacks have gotten less than they deserve” and “It’s really a matter of some people not trying hard enough; if Blacks would only try harder they could just be as well off as Whites.” The second and third statements were reverse-coded, then responses to all four statements were averaged together to create a composite Modern Racism (i.e., Racial Resentment) composite index, which showed excellent reliability, Cronbach’s $\alpha = .96$.

Demographics

Demographic items were measured upon entry into the AmeriSpeak Panel prior to the present study. These included age, gender (men, women), race/ethnicity (“Asian / Pacific Islander, non-Hispanic”, “Black, non-Hispanic”, “Other, non-Hispanic”, “White, non-Hispanic”) and “2+, non-Hispanic”), education (Less than high school, High school graduate, Vocational or technical school / some college / Associate’s degree, Bachelor’s degree and Postgraduate degree), household income, employment status (Working as a paid employee, Working self-employed, Not working on temporary layoff, Not working looking for work, Not working retired, Not working disabled and Not working other), marital status (Married, Widowed, Divorced, Separated and Never married), U.S. Census Bureau-designated geographic region (New England, Mid-Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain and Pacific) and whether or not participants live in a metropolitan area (No, Yes). Note that education, employment status and marital status were asked in relation to the participants themselves for participants ages 18+. For participants ages 14-17 these items were asked about their parents. Employment status was collapsed into two categories: working and not working.

Open-Ended Free-Response

At the end of the survey, participants were asked “What are some positive ways the United States can improve gun safety and/or address gun violence?” Participants responded by typing their answers into an open text box.

Data Analysis

Univariate, bivariate and cross-frequency descriptive statistics were computed for each main variable. Zero-order Pearson r correlations were conducted among continuous variables, with Bonferroni-adjusted alpha level to account for multiple comparisons. Ordinary least squares (OLS) regressions were conducted predicting gun narrative evaluation indices, gun attitudes, perceptions of safety, mental health outcomes and ideological worldview variables from each other, controlling for demographics.

Appendix D: Qualitative Methods

Methodology

Our approach is inspired by grounded theory (Glaser and Strauss, 1967; Glaser, 1978; Strauss 1987; Strauss and Corbin, 1990; Glaser, 1992; Strauss and Corbin, 1994; Charmaz, 2000; Clarke, 2005, Charmaz, 2006; Birks and Mills, 2011). Following Kathy Charmaz, we understand grounded theory as a set of methods used to “construct...[theories] through past and present involvements and interactions with people, perspectives and research practices” (emphasis in original; 2006, p. 10). We write that we are “inspired” by grounded theory because we recognize that our research does not contain all of the elements of grounded theory as conceptualized by the methodologists cited above. Nevertheless, we draw on the narrated lived experiences of participants in our theory-building, let collected data and initial analyses inform subsequent focus groups/interviews and higher level coding processes and work to remain reflexive throughout the research process through “fieldnotes” and memoing.

While our methods are inductive, our social positionalities, respective disciplinary backgrounds and the sociohistorical formations in which we find ourselves shape how we interact with participants, reflect on these interactions and analyze data. We write this report as the lead authors and as two scholars of color trained in social psychology and sociocultural and linguistic anthropology, respectively. Rae Jereza, Ph.D., an anthropologist, is a queer Filipinx scholar whose work is shaped by critical approaches to the study of right-wing phenomena in the U.S. Pasha Dashtgard, Ph.D., a social psychologist and formerly worked as a mental health professional, is a cis, heterosexual male, is Jewish and Persian, researches male supremacy and online radicalization and focuses on applied interventions to address extremism. Our research team also comprises graduate and undergraduate research assistants, who have been trained in the fields of extremism prevention and intervention. Research assistants took fieldnotes, transcribed focus groups/

interviews and were involved in the initial open coding process under the guidance and supervision of Jereza and Dashtgard. Finally, we write this report in the U.S. amidst a reactionary period characterized by growing economic, political and social inequality. In this milieu, guns have emerged as a way to protect oneself from threats (racialized, classed and gendered), real or imagined. This study hopes to shed light on how young people make sense of this reality and its violent consequences.

Methods

Recruitment

This study involves both in-depth, semi-structured focus groups one-on-one interviews with youth aged 14 to 30 living in the U.S.. We recruited interlocutors from survey participants during the quantitative portion of this study. After participants completed our Youth Gun Attitudes Survey, they were redirected to a separate page, where they were asked to participate in focus groups. NORC then sent us a list of potential participants, including their name, age, timezone, email address, race and assigned sex at birth. We contacted potential participants via email (using the bcc function). Emails included a Qualtrics survey, which divided participants into two age groups: 14 to 17 and 18 to 30. The survey also displayed text boxes reminding participants of this study’s purpose and outlining how PERIL works to protect their confidentiality. After choosing an age group, participants were directed to a Calendly page designated for their age group, where they were prompted to select a focus group date and time.² While the focus groups/interviews are ongoing, the following table summarizes participants’ demographic characteristics as of January 2023:

² Calendly is an online scheduling service. See www.calendly.com.

Table 1: Demographic Information

Characteristic	# of participants	% of participants
Gender Identity		
Woman	16	42%
Man	19	50%
Non-binary	3	8%
Race		
White	26	68%
Black	6	16%
Asian/Asian American and/or Pacific Islander	2	5%
Latinx/a/o	3	8%
Native/Indigenous	0	0%
Mixed Race	1	3%
Age Range		
14 - 17	15	40%
18 - 30	23	60%
Geographic Region ⁵		
Northeast	3	8%
Midwest	10	26%
South	10	26%
West	10	26%
Not disclosed	5	13%

Focus Groups and Interviews

We initially planned to conduct 10 to 15 focus groups with six participants each between September to December 2022. But given participant cancellations, reschedulings and no-shows, there were instances where focus groups turned into in-depth, one-on-one interviews or focus groups with two to four

participants. Nevertheless, we found one-on-one interviews and smaller focus groups beneficial as they afforded us the opportunity to ask more follow-up questions with individuals/smaller groups and establish deeper rapport with certain participants. We will continue conducting focus groups in 2023 until we reach 50-60 participants.

⁵ U.S. geographic regions are based on US Census Regions and Divisions of the United States. www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf

Focus groups and interviews lasted an hour to an hour and 30 minutes and were conducted and recorded over Zoom. Focus groups and interviews were semi-structured and concerned the following themes (see also Focus Group Protocol section below): 1) Gun encounters, 2) Peers' thoughts and feelings about guns, 3) Perceived adults' thoughts and feelings towards guns, 4) Sense of safety, 5) Media use/consumption and attitudes as they relate to guns and gun violence, 6) Thoughts and feelings about the U.S. political system and its capacity to address issues of gun violence and 7) Thoughts and feelings around perceived public discourse on guns. We developed these themes and questions based on the quantitative portion of this study with the goal of adding nuance and depth to survey results while also giving participants the opportunity to elaborate on their survey responses. For example, most participants constructed themselves as political "moderates" or expressed misgivings about both parties. This suggests that participants' political identities — which were primarily modeled after major electoral parties in the quantitative portion of this study — are not necessarily captured by their stated (or registered) affiliation with "mainstream" political parties (i.e., the Democratic party or Republican party) or Libertarianism. This is perhaps unsurprising given Americans' growing disillusionment with the U.S. two-party system and the political establishment in general.

Practically speaking, the protocol served as a flexible guide to interviewing as we tailored our questions according to participants' respective backgrounds (e.g., age, race, gender, political beliefs and more) and relative responsiveness to prompts from interviewers/facilitators. For example, we found that participants in the younger age group (14-17) were reluctant to tell their stories around guns and gun violence unless we eased into the topic. Thus, we opened by asking them first to describe their neighborhoods, the activities they enjoy and their school communities before asking them about their experiences with guns and gun violence. In contrast, many young adult participants (18-30) were willing and at times eager not only to share their stories about guns and gun violence, but also their political interpretations of gun phenomena. Participants from the younger age group often struggled to engage in self-conscious political interpretations, which is understandable given that teens under 18 might not necessarily have the tools, resources, confidence or relative

life experience to situate themselves within a complex political landscape, let alone talk about it. In some situations, this struggle operated as a function of shyness. Some participants seemed reluctant to share their interpretations — however developed — because they felt they didn't know enough about the topic. Flexibility and the ability to improvise were key in these situations. When we sensed that participants might have something to share but were reluctant for the aforementioned reason, we tried to establish better rapport by steering the conversation away from "serious" topics towards potential intersections in interests and activities between interviewer(s) and participant(s). We found, for example, that video game talk was a useful way to engage youth, especially if they mentioned that they play games in their free time.

We also took informal, unstructured "field notes" on participants' body language and non-verbal reactions to interviewers and each other. These notes helped us recall our sense of participants' tone, mood and level of engagement when coding data. They also helped us recall participants' surroundings and location, which are useful for contextualizing their utterances. The latter was especially important for interviews/focus groups with teens, whose parents, siblings and other family members occasionally refused to leave the room, were within earshot or walked in and out of the room. In such situations, teens occasionally communicated with us nonverbally through gestures and facial expressions that indicated they were uncomfortable — or unwilling — to answer a question. Consider the following exchange with a 16 year old interviewee:

Rae Jereza: Okay. Do you ever see news on, like, social media?

Participant: Um, yeah, I have.

RJ: Mm-hmm. What kinds of social media do you use?

P: Um, my mom doesn't really like me using any —

RJ: Sorry?

P: My mom doesn't really like me using any.

RJ: Oh, why not?

P: Um, she doesn't really like it.

RJ: So are you not allowed to then?

P: Yeah.

RJ: Do you use it anyway — *participant widens her eyes and shakes her head quickly*

Okay. So how about — let’s talk about like, you know, our political systems, like the government[...] do you trust that our government can keep us safe from gun violence? And why or why not?

In the example above, the interviewee communicated that she preferred that Jereza abandon this line of questioning about social media using her facial expression and physical gestures. Jereza then quickly changed the topic of conversation to the interviewee’s thoughts around the government’s ability to keep people safe from gun violence.

The struggles we encountered interviewing younger teens, as in the example above with our participant’s reluctance to discuss her social media use within her mother’s earshot, and the difficulty of capturing teens’ political subjectivities (however self-conscious or “developed”), suggest that future researchers might consider using different methods to get at teens’ thoughts and feelings about guns and gun violence in the U.S. While we were able to identify patterns in younger participants’ utterances during focus groups and interviews, an ethnographic methodology might be more suitable to understand the sensemaking processes of teens under 18. Ethnography would afford researchers more opportunities to get at how younger teens experience and process gun violence in various contexts (see also the “Limitations” section of this report).

Focus Group Protocol

Phase 1 – Introduction (15 minutes)

1. Introducing everyone
 - Facilitator + co-facilitator/notetaker
2. Participant introductions
3. Meeting purpose
 - Confidential
 - Recording & audio transcription consent
 - General consent
4. Meeting timing/structure

Phase 2 - Discussion (50 minutes)

1. Facilitated focus group discussion

Phase 3 - Conclusion (15 minutes)

1. Wrap-up focus group
 - How data will be analyzed and used
2. Q & A for PERIL
 - Contact information for PERIL & AU IRB for follow ups

<p>Meeting Data</p> <p>Date: PERIL Facilitator(s):</p> <p>PERIL Notetaker: Start Time: End Time:</p>	<p>Participant Data</p> <p>Number Participants Scheduled: Number Participants Attended: Age Group (Teen or Adult):</p>
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Introduction

Hi everyone, I'm Rae Jereza from PERIL. This is (PERIL staff member #1) who will co-facilitate this discussion and (PERIL staff member #2) who is our notetaker. Just a quick reminder that if you're not logged into your university email in joining this Zoom call, please go ahead and do so now (wait until complete). Focus group participants, if you haven't already done so, please ensure your display name does not reflect your full name. You may use your legal or preferred first name or a pseudonym: [for teens] a made-up name that differs from the name(s) you use outside of this focus group. Your display name is the name that is visible to Zoom meeting participants. You can find your display name on the bottom left hand corner of the box containing your face/image.

[Check if everyone's display name is visible. If not read what follows]

If you are on a laptop or desktop, you can change your display name by clicking the "participants" icon at the bottom of the Zoom window. Find your name on the list of participants, hover over your name and click "more." Finally, click "rename," type your modified display name into the name change window and click "OK."

If you are joining us on a phone or tablet, you can change your display name by tapping "participants" at the bottom of the screen. Tap your name on the list of participants and then tap "rename" from the drop down menu. Enter your modified display name into the new screen name window and tap "OK" (wait until complete).

At this time, we'd like to go ahead and ensure that everyone is present and actively listening. Active verbal participation or participation by using the chat function, is required during this focus group. Cameras are also required to be on unless you have communicated your situation to me (the facilitator) and made me aware of why you would prefer to keep your camera off. Can everyone give some form of acknowledgement that they are present and ready to begin?

We'd like to start by reviewing why we're here and what it is we are doing, as well as go over participation guidelines for this focus group. If you have any questions about the guidelines I am about to discuss, please use the hand-raising function or type your question in the chat. You can find the hand-raising function on your laptop or desktop by clicking "raise hand" at the bottom of your screen. You can also navigate over to "participants" at the bottom of your screen and select "raise hand" at the bottom of the participant window.

If you are on your phone, you can use the hand-raising function by tapping the icon "more" on the bottom right hand side of your screen. Then, select "raise hand" from the drop down menu.

Purpose

This focus group is for the purpose of learning about youth feelings, thoughts and experiences around guns. It is a chance for you to elaborate on your survey responses and an opportunity for us to dig deeper into your beliefs and the factors that shape them. We will be asking you questions about your personal encounters with guns and your community members' thoughts, attitudes, beliefs and approaches to guns and gun ownership. We hope to use what we learn from this discussion to develop nuanced analyses and interventions into issues of gun violence in the U.S. This focus group should take about 60 minutes.

Confidentiality

To avoid breach of confidentiality — meaning situations where your personal identity can be tied to your responses — we ask all of you to refrain from sharing the details of our discussion with people outside of this focus group. Nothing said here today leaves this room.

We also ask that you do not share your last name. You are welcome to use your legal or preferred first name or a pseudonym: [for teens] a made-up name that differs from the name(s) you use outside of this focus group.

PERIL keeps any of your identifying information strictly confidential. This means that we work to ensure that none of your responses can be tied to your identity either indirectly or directly. We do this by storing your contact information in a password-protected folder in a USB drive that only PERIL researchers will have access to. We will also remove any identifying information from transcripts of this focus group session, should you share personally identifying information during the focus group. Further, your name and other personally identifying information will not be attached to any report or publication that comes out of this study.

Consent

PERIL received your consent to participate in this focus group through a NORC/AmeriSpeak survey. By clicking on the Zoom link for this session, you have also agreed to participate in this focus group. Consenting to participate means that you have agreed to be recorded for the purposes of analyzing this focus group session. It also means that you consent to being anonymously quoted in research reports authored by PERIL, SPLC and Everytown based on this focus group. Your feedback, commentary and audio transcriptions will be analyzed for the purpose of developing strategies to prevent and intervene in gun violence.

Community Guidelines

Another thing before we start: let's work together to keep our conversation respectful, open and encouraging. Insults, personal attacks and put-downs are not allowed in this space. If you verbally attack, insult or put-down another person in this focus group, including staff, you will be removed from the Zoom call.

I'd also like to learn what would make you feel supported in voicing your perspectives. Can everyone take a minute to think about community guidelines they'd like the group to keep in mind? When you're ready to share, please use the hand-raising function to share using audio or post your suggestion in the chat.

You should be able to find the chat function on any device by selecting "more" on the bottom of your screen. Then, select "chat." Once the chat window pops up, enter your message in the text box and hit enter to send (wait a minute and then start calling on participants & reading suggestions in the chat).

Roundtable Introductions

I'd love to go around the group and get a sense of who is here. Let's go around and introduce ourselves by sharing our pronouns, if comfortable, age, where we're from and an important aspect of our lives. This could include an activity that you love doing, an interest, your social identities like gender, race, disability or sexuality or an issue/topic that you feel passionate about. I'll start ... (move onto PERIL staff, then participants). As we get into the discussion, please also either put in the chat or write down any questions or ideas you are having as they come up for you. We want to make sure we address any thoughts, concerns or questions that you have, even if we don't explicitly ask about them.

Focus Group Questions

Question 1: First Gun Encounter

Can you tell us about the first time you encountered guns?
How did you feel during this encounter?

Probes

1. Did you encounter them in person or through media (movies, shows, social media and/or video games)?
2. If you've encountered them in person, where were you, who were you with and what did you do with them?
3. If you've encountered them in person, how did it make you feel to see, touch or hear them?
4. If you shot a gun, how did it make you feel to pull the trigger? How about hitting a target?
5. If someone else used a gun around you at that time, how did it make you feel to see them use it?
6. If you have never seen, held or shot a gun in person, how do you think it would make you feel to see, hear or use one?

Question 2: Perceived Adult Attitudes

How do the adults in your life (parents, guardians, other relatives, coaches, counselors, teachers etc.) feel about guns?

Probes

1. For example, do they think they are useful, dangerous, empowering or something else? Why?
2. Do/have they encouraged you to learn how to shoot a gun? Can you share how you feel about their decision to encourage or discourage you to use guns?

Question 3: Perceived Peer Attitudes

How do your peers (friends, classmates, etc.) feel about guns?

Probes

1. Do guns come up in conversation with friends or at school? If so, what kinds of things do you talk about? How do you feel about these conversations? Do you agree with your friends' beliefs around guns and gun violence? Why or why not?
2. Do you have friends, classmates or other peers that own guns or have adults in their lives who own guns? If so, how do you feel about the fact that they do?
 - If not, how would you feel if you had friends, classmates or peers who owned guns or had adults in their life who own them?

Question 4: Personal & Community Safety

Do you feel that your community is safe? How do you think guns affect your community's safety?

By community, I mean:

1. The people with whom you feel deeply connected or bonded to, such as Discord communities, schoolmates, community of American youth, your neighborhood community or communities of people with whom you share social identities like race, gender, sexuality, disability, etc. Examples of the latter include the working class community, the LGBTQ+ community, the Latinx community and so on and so forth.
2. The people with whom you share State-delineated geographical spaces, such as your town, city, state and country.
3. People can belong to multiple communities, so you are encouraged to talk about as many or as few as you'd like. Finally, these communities need not be people you have met in person: you may be connected to these communities online, IRL or both.

Probes

1. Who or what threatens the safety of your community(ies)?
2. How have mass shootings and active shooter lockdowns affected your sense that you are safe in your school, work or neighborhood communities?
3. **[For adult groups]** Did you feel safe in school as a child? If you are currently in school, do you feel like the uptick in mass shootings have changed your sense of safety at school compared to when you were younger? How so?
4. Whose job do you think it is to keep your community safe? How should they go about it?

Question 5: News Media and/or Social Media

How do you feel about how gun violence is discussed in the media?

By media, I mean both journalistic news sources and content by various creators on social media.

Probes

1. How do you decide which news outlets or creators to follow? How did you find these sources? Which platforms do you use to access their content?
2. How did you initially come across these media sources?
3. How do you think their content shapes, aligns with or differs from your views about guns, gun ownership and gun violence?
4. How do you feel about the way they talk about other political issues? For example, voting, Supreme Court decisions, immigration, race relations, etc.?
5. How do you feel about the way that news outlets/ creators you do not follow talk about other political issues? For example, voting, Supreme Court decisions, immigration, race relations, etc.?

<p>Question 6: Political System & Legislation</p> <p>How confident are you that our current political system can effectively generate (e.g., through legislation) ways to keep you and your community(ies) safe from gun violence?</p>	<p>Probes</p> <ol style="list-style-type: none"> 1. How would you describe our current political system? Do you think everyone benefits equally? Why or why not? 2. What does democracy mean to you? Do you think our current political system is democratic? 3. What, if anything, would you change about our governments' approach to gun ownership and gun violence? Why? 4. Do you think that mass shootings would still occur with stricter laws around gun ownership and safety? Why or why not?
<p>Question 7: Public Discourse on Guns</p> <p>[For teens] What do you wish adults knew about young people's thoughts and feelings about guns?</p> <p>[For young adults] What do you wish the public knew about guns, gun ownership and gun violence?</p>	<p>Probes</p> <ol style="list-style-type: none"> 1. What, if anything, do you think is missing from public discussions (on the news, among adults, on social media, etc.) about guns and their relationship to violence? 2. Why should we include these topics in public discussions about guns?
<p>Wrap-up</p> <p>Thank you so much for your insights and feedback! We are going to conclude the focus group now by going over how this data will be analyzed and asking for your final thoughts or questions.</p>	
<p>Data Analysis and Use</p> <p>The information that you've provided to us today will be used to help develop a more nuanced understanding of youth feelings, thoughts, beliefs and experiences surrounding guns, including gun ownership and gun violence. Our goal is to provide interventions and policy recommendations that might help address gun violence in the U.S.. We have taken notes on your responses throughout this focus group, and we will rewatch this recording to further analyze your responses and will compare these responses with other focus groups that we've conducted in order to develop useful interventions and policy recommendations.</p>	
<p>Questions and Answers for the PERIL Team</p> <p>Any final thoughts or questions? Anything that you want to get off your chest before we conclude? Please let us know if you have any additional questions after this session concludes by reaching out to PERIL@american.edu. You also have the right to follow up with the American University Institutional Review Board at 202-885-3447 or IRB@american.edu if you believe your rights as a research participant have been violated, or if you have questions or concerns about the ethics of the study itself.</p>	

Data Analysis

The preliminary findings discussed in this report come from initial rounds of coding, which we conducted simultaneously with data collection. After transcribing focus groups/interviews using Temi,⁴ we employed an open coding method (Glaser, 1978; Strauss and Corbin, 1990, 1998), breaking data into chunks of texts and assigning both descriptive and analytical codes using ATLAS.ti. Seven individuals from our research team (Jereza, Dashtgard, Emily Pressman, Kesa White, Rashmi Chimmalgi, Laura Polomis and Wyatt Russell) were involved in this initial coding process. We met weekly to discuss coders' observations and questions and proposed new codes. In such meetings, Jereza and Dashtgard emphasized reflexivity, encouraging the team to reflect out loud why and how they noticed certain phenomena and categorized them in specific ways. For example, Jereza's background in analyzing language that indexes white supremacist stances sensitized them to participants' "coded" language about race, class and perceptions of safety. Thus, they drew attention to such phenomena during the coding process. Meanwhile, Dashtgard's background as a psychologist and mental health professional sensitized him to potential mental health symptoms and participants' claims about mental health.

From there, Dashtgard and Jereza engaged in a form of axial coding (Strauss and Corbin, 1990; Birks and Mills, 2011) by placing initial codes on virtual sticky notes using the platform Miro.⁵ They then sorted these sticky notes into larger categories and began theorizing their potential relationships. Then, on ATLAS.ti, Jereza synthesized codes that seemed to convey the same ideas and captured similar phenomena and began the process of grouping and arranging codes hierarchically. Next, they developed a codebook with definitions, which they then uploaded to ATLAS.ti's web version for collaborative coding among faculty researchers and research assistants. Jereza and Dashtgard then looked over all coded transcripts to add, remove and refine codes as needed. For this report, Jereza drew on codes and code groups (based on the January 2023 version of the codebook), which they sorted according to focus group protocol themes (see Focus Group Protocol above) and additional patterns that emerged from initial coding rounds.

Finally, it is important to note that data analysis and collection are ongoing, iterative and concurrent processes (see Birks and Mills, 2011). Data collection shapes our analysis and vice versa. For example, patterns that the research team collectively found interesting and potentially compelling shaped subsequent focus group/interview questions. In this way, we use interviews to confirm the existence and importance of certain patterns and determine the extent to which we have conceptualized them as close to participants' self-understandings and lived experiences as possible. In the following months, we will continue collecting data and conducting higher levels of analysis through which we hope to generate theories surrounding youth sensemaking about guns and gun violence.

⁴ Temi is a web-based speech recognition software. Research assistants corrected AI generated transcripts for errors. See www.temi.com

⁵ Miro is a web-based visual collaboration tool. See miro.com

Appendix E: Quantitative Results

Total recruited unweighted N = 4,840

- Excluded if lower than 1/3 the median survey duration time
- Excluded if skipped > 50% of relevant questions

Final weighted N = 4,156

Research Questions

RQ1: How many U.S. teens and young adults have access to guns? How many guns do they have access to and what types? What attitudes and individual differences (e.g., male supremacy, racism, etc.) are associated with youth's gun access?

To assess ease of gun access, participants were asked, "How easy or difficult is it for you to access a gun?" on a five-point scale from 1 (Very easy) to 3 (Neither easy nor difficult) to 5 (Very difficult). The variable was reverse scored for interpretation such that higher values indicate easier access to guns. On average, participants reported 3.14 out of 5 (standard deviation [SD] = 1.38). Of those who said it was easy to access a gun, n = 828 (20%) reported that it is "somewhat easy" and n = 888 (22%) reported that it is "very easy". Together, this suggests that about 42% of U.S. teens have at least somewhat easy access to a gun.

Participants were next asked, "How many guns do you have access to?" with response options ranging from 0 (None) to 10+. Although n = 2,496 (61%) reported access to no guns, n = 1,616 (39%) reported access to at least one gun (mean = 1.26, SE = 2.31), n = 472 (11%) reported access to at least four guns and n = 144 (3%) reported access to 10 or more guns.

The 61% of participants who reported access to no guns were then asked, "Do you think you will have access to one in the future?" Of this subsample, n = 412 (17%) reported 2 yes and n = 1,164 (47.81%) reported maybe / unsure. This suggests that, in addition to the 42% of teens and young adults who already have at least

somewhat easy access to a gun, an additional 10% plan to have access to a gun in the future.

The 39% of participants who reported having access to at least one gun were next asked, "How do you have access to this/these gun(s)?" The most common chosen response was "my parent(s) or guardian(s) own(s) the gun(s)" (n = 640, 20%), followed by "bought myself" (n = 529, 17%) and "belongs to someone else (other than my parent/s or guardian/s) in my household" (n = 366, 13%).

The most common type of gun teens and young adults have access to are handguns (n = 1,182, 32% of participants who have access to at least one gun), followed by shotguns (n = 694, 21%), semi-automatic rifles (n = 341, 12%), bolt-action rifles (n = 341, 12%) and lever-action rifles (n = 213, 8%). To investigate what attitudes and individual differences are associated with youth gun access, an ordinary least square (OLS) regression was conducted predicting ease of gun access from strength of political identity, PHQ, loneliness, PTS, gun-related media hours, number of experiences gun-related injuries and deaths and age.

RQ2: How safe do U.S. teens and young adults feel today? How are their attitudes about, and access to, guns associated with their perceptions of safety? To what extent are their gun-related experiences associated with their perceptions of safety?

RQ3: What gun-related experiences and individual differences are associated with U.S. teens and young adults' gun attitudes? To what extent are politics versus gun-

related experiences associated with their gun attitudes?

RQ4: How familiar are U.S. teens and young adults with common arguments in favor or against owning guns? What is the role of gun-related media exposure in predicting U.S. teens and young adults' gun attitudes and familiarity with pro-gun arguments?

To assess U.S. teens' and young adults' familiarity with common arguments in favor or against gun ownership, participants were asked, "How familiar are you with each of the following arguments for owning a gun?" on a five-point scale from 0 (not at all familiar) to 4 (very familiar). On average, young people were most familiar with the argument that "Guns are the best way to defend yourself, your loved ones and your community," with a mean familiarity score of 2.38 (SD [standard deviation] = 1.32). Of young people who expressed some degree of familiarity with this narrative, $n = 1,111$ (27.05%) reported being "familiar" with this narrative, while $n = 1,016$ (24.73%) reported being "very familiar" with this narrative. This suggests that over half of respondents (51.78%) are either relatively or extremely familiar with the narrative that guns are the best way to protect oneself and one's family. Participants were then asked about how strongly they agreed or disagreed with these same narratives on a scale from 0 (strongly disagree) to 4 (*strongly agree*).

Participants in general most agreed with the narrative that "It isn't fair that the actions of a few troubled individuals should have a negative effect on the gun rights of good Americans," (mean = 2.07, SD = 1.34); more respondents ($n = 1,695$, 41.3%) either agreed ($n = 1,007$, 24.5%) or strongly agreed ($n = 688$, 16.8%) with the statement, compared to those who either disagreed, $n = 635$ (15.5) or strongly disagreed, $n = 734$ (17.9%) with the statement, only 33.4% of the sample. The second-most agreed-to narrative was that guns were the best way to protect people and their families (mean = 2.02, SD = 1.28), with 37.6% ($n = 1,584$) saying that they agreed ($n = 957$, 23.3%) or strongly agreed ($n = 584$, 14.3%) with the statement. In comparison, only 32.9% ($n = 1,349$) of respondents disagreed ($n = 661$, 16.1%) or strongly disagreed ($n = 688$, 16.8%) with the statement.

Participants were finally asked to assess the weakness or strength of these arguments on a five-point scale from 0 (very weak argument) to 4 (very strong argument). The two arguments

rated most strongly were "Guns are the best way to defend yourself, your loved ones and your community" (mean = 2.10, SD = 1.34) and "It isn't fair that the actions of a few troubled individuals should have a negative effect on the gun rights of good Americans who have done everything right" (mean = 2.03, SD = 1.30). These two narratives, that guns are the best way to protect communities and that "responsible gun owners" should not have their gun rights infringed because of "troubled individuals," are in this data showed to be among the most prevalent (I.e., familiar), most agreeable and most likely to be perceived as strong arguments in favor of gun ownership.

RQ 5: What is the association between demographic variables and the four outcome variables, i.e., how do age, gender, race/ethnicity, income, geography relate to youth access to guns, perceptions of personal safety, gun attitudes and familiarity with pro-gun arguments?

Appendix F: References

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