Perceptions of firearm-related harm among US adults living in firearm-owning households

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Background

• Firearms in the US
  • Owned by 1 in 4 adults and found in 1 in 3 households
  • 2 in 3 new and longstanding gun-owners say protection is one of the main reasons that they own firearms.
• Based on empiric evidence, firearms at home increase the risk of death from unintentional, intentional self-inflicted and assault-related injury for all household members.
  • Especially strong risk of suicide

Miller 2002; Hemenway 2011; Anglemyer 2014; Azrael 2017; Wertz 2018
But how do adults living in firearm-owning households perceive the likelihood of firearm-related harm?
Fewer than 10% of adults living in homes with firearms think that firearms make homes less safe. In fact, 3 in 4 gun-owners and 1 in 2 non-owners in these households feel that firearms make the home safer.

Most adults, regardless of their firearm ownership status, grossly overestimate the risk of becoming a victim of firearm violence.

Adults, regardless of their firearm ownership status, overestimate the frequency of firearm homicide relative to firearm suicide in the general population.

- In 2015, firearm suicide was more common than firearm homicide in all states except in Illinois, Maryland, and New Jersey.
- Only 26% (CI: 23%–29%) of US adults correctly identified the most frequent intent in firearm violent death in their state.

Examples of prior research on risk perception in the US

Pew 2017; Morgan 2018; Pallin 2021
Specific Aim

- To describe how US adults living in firearm-owning homes perceive the relative likelihood of firearm-related harm by intent for specific groups in the population
  - Children
  - Adolescents
  - Individuals with mental health issues
  - Individuals with substance use disorders
  - Individuals with cognitive impairment
- Rationale: These groups may be at especially high risk of compromised decision-making or sustaining certain types of firearm injury.
Approach

• National Firearms Survey 2019 (July 30, 2019 – August 11, 2019)
• Ipsos KnowledgePanel
  • Probability-based web panel of approximately 55,000 non-institutionalized, English-speaking adults designed to represent the US population, excluding active military service personnel.
  • Sample for this study: 6721 adults living in firearm-owning homes
    • Of those individuals, 4030 (60.0%) were qualified completers.
Survey question

• Please rank which type of event is most likely (1), second most likely (2), or least likely (3) to occur for each group:
  • Group
    • Child under the age of 10 years
    • Adolescent aged 10–17 years
    • Person with alcohol or drug addiction
    • Person with mental health issues
    • Person with Alzheimer's disease or another form of dementia
  • Event
    • Accidentally harm self or someone else with a gun
    • Injure self on purpose with a gun
    • Injure someone else on purpose with a gun
Results
Summary of findings

• Substantial proportions of US adults living in firearm-owning homes perceived unintentional firearm-related harm to occur more frequently than intentional self-inflicted firearm injury or assault-related firearm injury across all groups.
  • This is in contrast with the existing evidence about the actual risk.
• A plurality, but not a majority of, participants in this study ranked intentional self-inflicted firearm injury as the most likely occurrence for individuals with mental health issues.
  • Notably, the proportion who ranked unintentional firearm-related harm first was nearly as large, highlighting the inflated perceived relative risk of “accidental” injuries even for this group.
• Results did not differ based on firearm ownership or parental status.
Limitations

- Relative risk vs. absolute risk
- Limited existing knowledge on actuarial risk of harm, especially non-fatal injury, among certain groups
- Question about perceptions of injuring someone else on purpose with a gun did not include the context (e.g., criminal use, self-defense).
- No question was asked about perceptions of victimization (i.e., getting injured by someone else on purpose with a gun).
- Possibility of non-response and social desirability bias
**Implications**

- Findings signal opportunities for corrective prevention messaging.
- Communicating risk to motivate behavior change:
  - Adults who develop more accurate perceptions of the relative likelihood of firearm injury by intent, especially of firearm-related suicide relative to firearm-related "accidental" injuries and assaults, might gauge risks to themselves and their family members more accurately.
  - These individuals might also feel differently motivated to take preemptive steps to ward off intentional harm that they would not have taken if the most salient risk that they perceived was an "accidental" injury.
- Findings from this study could inform health communications around firearm access and safety during periods of heightened risk for different members of the home.
Some questions for future research

• Does correcting these misperceptions create opportunities to improve safety?
• Do risk perceptions documented here among adults living in households with firearms reflect perceptions of adults living in homes without firearms?
  • If not, does that difference help explain the decision to live in a home with firearms?
• Under what circumstances does promoting awareness about the relative and absolute risk of intentional injury, compared with unintentional injury, motivate some firearm owners to make home firearms less accessible, at least to some people or during some high-risk periods?
• Is tailored messaging to specific subgroups with the greatest levels of misperceptions about relative risk, possibly developed using their own input, more effective than broad messaging strategies?
Thank you

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