

# SUMMARY OF LIABILITY ANALYSIS FOR CIVIL LITIGATION

By Barry C. Edwards, J.D., Ph.D. | Fair Trial Analysis, Inc. | www.fairtrials.us | January 8, 2026

## CASE SUMMARY

A minor child was playing at his same-age friend's house. The friend's parent is at home. The children find the parent's handgun, which was hidden inside a bedroom closet, and play with it. The child accidentally shoots himself in the hand. The friend's parent, who was watching television in the living room, immediately calls 911. The child's hand is severely injured. He is treated at the hospital and is able to return home later the same day.

## KEY QUESTIONS

Who is most likely to blame the parent for the child's injury? How does the child's age affect jurors' assessment of liability and verdict probabilities?

## METHOD OF ANALYSIS

Survey research is used to ascertain the opinions of American adults. Respondents are asked to carefully read a chronological narrative of the accidental shooting.<sup>1</sup> *The injured child's age is a random number between 4 and 17.*<sup>2</sup> After reading the case summary, respondents are asked who deserves more blame for the child's injury: the child or the friend's parent. The boy, his friend, and his friend's parent are described in general terms without personal details.

## SAMPLE PROFILE

121 research participants completed a brief online survey for compensation.<sup>3</sup> Sample observations are weighted so that respondents approximate a nationally representative jury pool with respect to age, education, gender, and race.<sup>4</sup> (The sample can be reweighted to represent any state or county.) Screening, attention checks, and quality controls are provided by the crowdsourcing platform and survey software.

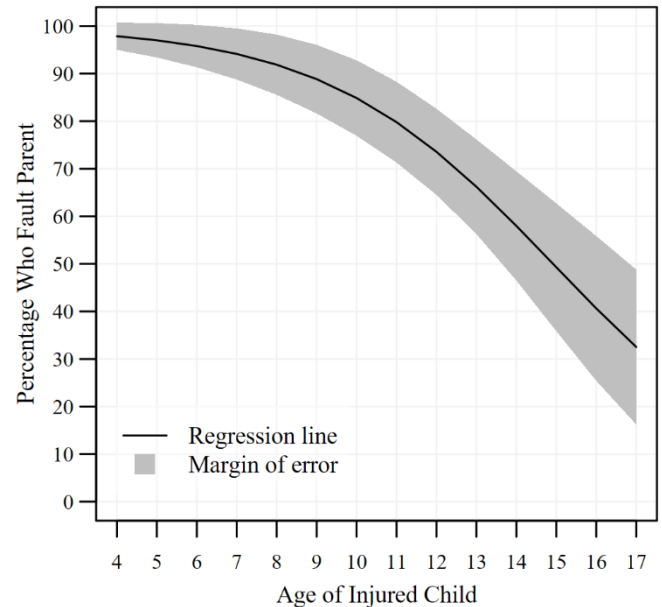
Mean age	42.8
College graduates	28.5%
Female	50.9%
Non-white	38.4%
N	121

## WHO BLAMES THE PARENT?

Respondents' tendency to fault the parent does not appear to be related to respondents' age, gender, or educational attainment. Non-white respondents are significantly *more likely* to blame the parent (84% vs. 63%), as are those with prior jury experience (88% vs. 65%). Parental status is also significant. Respondents with children living at home are most likely to blame the parent (84%), but respondents with children who do not live at home are less likely to blame the parent (49%) than respondents without children (65%).

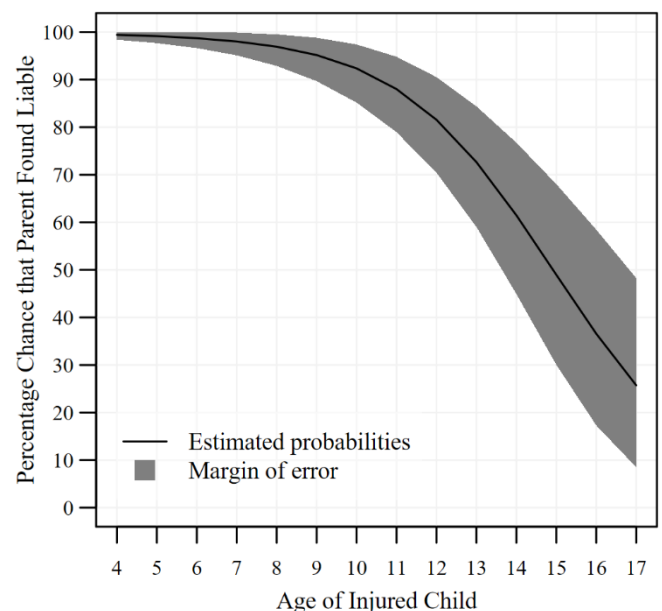
## INFLUENCE OF CHILD'S AGE

Respondents are less likely to find the parent at fault as the child's age increases. The figure below displays a regression line fitted to the data. The margins of error reflect the survey's modest sample size.



## JURY VERDICT PROBABILITIES

The percentage of jurors who blame the parent translates to a probability of a jury verdict against the parent based on a logical model of civil jury deliberation.<sup>5</sup> The figure below plots the probabilities with six-person juries.



## DISCUSSION OF RESULTS

This simple, low-cost analysis offers general insights for evaluating civil liability for an accidental shooting. A larger sample and additional details about the accident and individuals involved would improve estimates. It is also possible to compare respondents' opinions by other personal characteristics (e.g., gun owners vs. non-gun owners), and assess multiple predictors simultaneously, but more data are necessary.

Estimated verdict probabilities account for (a) preferences in the population, (b) jury selection, (c) jury size, (d) jury deliberation, and (e) uncertainty due to small sample size.<sup>6</sup> The analysis of verdict probabilities can be further refined to account for jurisdiction-specific procedures, such as the jury size and number of peremptory strikes available to parties, and/or hung jury probabilities. The case presents interesting questions. I am happy to discuss the findings further and answer any questions you have.

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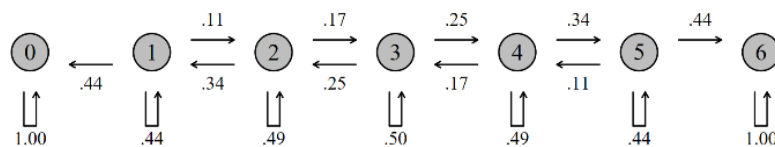
<sup>1</sup> Participation is limited to adults who voluntarily consent to take the survey. Participants are informed about the general nature of the survey but not that any elements of the survey are randomly manipulated.

<sup>2</sup> Researchers have demonstrated the validity of estimating jurors' verdict preferences using survey respondents' responses to written vignettes. See, e.g., Steffen Bieneck, *How Adequate is the Vignette Technique as a Research Tool for Psycho-Legal Research*, in SOCIAL PSYCHOLOGY OF PUNISHMENT OF CRIME (Margit E. Oswald, et al. eds., 2009); Michael J. Saks, *What Do Jury Experiments Tell Us About How Juries (Should) Make Decisions?*, 6 S. CAL. INTERDISC. LJ 1 (1997).

<sup>3</sup> Crowdsourcing platforms are widely used to efficiently obtain quality survey responses from a diverse population. See, e.g., Alexander Coppock, *Generalizing from Survey Experiments Conducted on Mechanical Turk: A Replication Approach*, 7 POL. SCI. RSCH. & METHODS 613 (2019); Christoph Bartneck et al., *Comparing the Similarity of Responses Received from Studies in Amazon's Mechanical Turk to Studies Conducted Online and with Direct Recruitment*, 10 PLOS ONE e0121595 (2015); Justin M. Stritch et al., *Crowdsourced Data in Public Administration Research: A Review and Look to the Future*, PUB. ADMIN. REV. (Early view) (2024).

<sup>4</sup> See Graham Kalton & Ismael Flores-Cervantes, *Weighting Methods*, 19 J. OFFICIAL STATS. 81 (2003). The sampling weights used in this analysis are based on iterative proportional fitting, more commonly called raking. The raking method finds weights that balance the sample and population along multiple dimensions simultaneously. The method resembles leveling a patch of ground with a rake: you smooth the ground in one direction, then rake sideways to fill in low spots, alternating until the patch is level in all directions. This iterative process is necessary because the dimensions being balanced may be correlated.

<sup>5</sup> Given the survey-based estimate of jurors' verdict preferences, one calculates the probability of selecting 0, 1, 2, ... J initial votes for finding the parent liable where J is the jury size. Final jury verdict probabilities depend on the jury's initial vote. The deliberation process is effectively modeled as a random process that proceeds with defined transition probabilities until reaching either endpoint.



These insights enable one to extrapolate verdict probabilities from survey data without the time and expense of staging mock jury deliberations. See Barry C. Edwards, *Measuring Fairness*, 77 ALA. L. REV. (forthcoming 2026); Barry C. Edwards, *If the Jury Only Knew: The Effect of Omitted Mitigation Evidence on the Probability of a Death Sentence*, 32 VA. J. SOC. POL'Y & L. 1 (2025).

<sup>6</sup> The underlying analytic functions are freely available for the open-source R program for statistical computing. The package includes detailed explanations of analytic routines with examples of code usage. See Barry Edwards, *sate: Scientific Analysis of Trial Errors*, v. 3.5.0, THE COMPREHENSIVE R ARCHIVE NETWORK (Nov. 5, 2025), <https://cran.r-project.org/package=sate>. The relationship between the number of jurors in favor of a verdict and the probability of jurors agreeing to that verdict reflects patterns observed in decades of research on deliberating juries across a variety of settings. See Dennis J. Devine et al., *Jury Decision Making: 45 Years of Empirical Research on Deliberating Groups*, 7 PSYCHOL. PUB. POL'Y & L. 622 (2001); Harry Kalven & Hans Zeisel, *THE AMERICAN JURY* (1966). The dynamics of civil and criminal jury deliberations are thought to be similar, except that civil rules do not favor one party the way that the presumption of innocence and guilt beyond reasonable doubt standard do in the criminal trial context.