



Association between gun owner attitudes and their behavior in private firearm sales

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ABSTRACT

Federal law places no regulations on unlicensed, private firearm sellers. However, a majority of the firearms used in crime come from these unregulated markets. This study aims to characterize the demographics of gun owners who engage in private sales, determine how often these individuals engage in selling behaviors, and ascertain whether sellers' attitudes are associated with their reported behaviors in the private market. A nationally representative web-based survey of 1444 gun owners, fielded in Spring 2016, were asked about their participation in the private market. The 238 respondents who participated in the private market were asked about their behavior on their last sale and the extent to which they felt it was the responsibility of sellers to ensure purchasers were legally able to own a firearm. Less than half of private gun sellers agreed that it is the seller's responsibility to ensure purchasers are eligible to buy guns (46%). Among private sellers, only 44% checked purchasers for eligibility and 32% denied a sale due to concerns about whether the firearm would be used safely. Sellers who agreed it was their responsibility to ensure purchasers were eligible to buy a gun had 4.52 (95% CI: 1.78 to 11.5) times greater odds of reporting checking for a permit or conduct a background check on their last sale. These findings suggest a need for strategies to increase gun sellers' perceptions of responsibility for ensuring only eligible purchasers purchase guns, potentially including communication campaigns or educational programs.

1. Introduction

Federal law requires individuals who are "engaged in the business" of selling firearms to become a Federal Firearms Licensee (U.S Code, 1968). To qualify for this license, dealers must comply with certain regulations such as registering their business with the government and ensuring purchasers are legally eligible to purchase a firearm (i.e., not prohibited under state or federal law due to criminal history or serious mental health issue). However, while federal law prohibits all individuals from knowingly selling guns to purchasers who are ineligible to buy them, there is no federal requirement that unlicensed sellers ensure buyers are legally permitted to acquire a gun. This loophole facilitates access to firearms by individuals who are prohibited from gun ownership.

The majority of firearms used in violent crimes were acquired through these largely unregulated markets such as sales between

unlicensed individuals in one's social network or among individuals who met online or at gun shows. (Chesnut et al., 2017; Cook, 2018; Cook et al., 2015; Wintemute et al., 2010) The U.S Department of Justice's 2016 Survey of Inmates in State Correctional Facilities found that just 10% of prisoners purchased the firearm used in their crime from a licensed dealer, compared to 25% from a family member or friend, 43% from the street/underground market, and just 6% through theft. (Alper and Glaze, 2019) Additionally, individuals in states without private market regulations were nearly twice as likely to report acquiring their firearm without a background check compared to those living in states with comprehensive background checks or purchaser licensing requirements (permit to purchase laws). (Miller et al., 2017) Living in a state with a given gun policy may also impact perceptions of the acceptability of that policy. A national study of adults found that gun owners living in states with licensing laws had higher support of these policies compared to adults who did not. (Crifasi et al., 2020).

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While some studies have examined the attitudes of gun owners more generally, (Barry et al., 2018; Crifasi et al., 2018) there is a dearth of literature examining private firearm sellers' attitudes about their responsibilities in the private market. Prior research has examined public perceptions about whether it is acceptable to sell a firearm without conducting a background check. Hemenway et al., 2018 found that while 72% of the public viewed this as unacceptable, subgroup perceptions varied with men, gun owners, and conservatives slightly less likely than others to find selling a gun without a background check unacceptable (Hemenway et al., 2018). However, this study did not additionally assess how this attitude varied based on if the gun owner participated in the private market or how attitude varied based on respondents' selling behaviors if they participated in the private market. To our knowledge, no prior research has examined whether private firearm sellers' attitudes about their responsibility for conducting background checks affects sellers' reported background check behaviors (i.e., whether or not they report checking purchasers for eligibility before selling a firearm).

The purpose of this study is to examine the characteristics of gun owners who engage in private sales, describe how often these individuals check purchasers' backgrounds and engage in other seller behaviors, determine whether a gun owner's attitude is associated with their participation in the private market, and assess whether sellers' attitudes about their responsibility to ensure purchasers' eligibility were associated with their reported behaviors in the private market. This knowledge could help inform program interventions to increase the likelihood that private sellers conduct background checks on prospective purchasers prior to selling a firearm. This knowledge could also be used to inform efforts to augment state policies that require all sellers conduct background checks.

2. Methods

2.1. Data

A nationally representative, web-based survey to assess attitudes and reported behaviors of current guns owners was conducted. Development of the survey was informed by focus groups with gun owners in Texas, as described elsewhere. (Crifasi et al., 2018) The survey research firm GfK Knowledge Networks (GfK) fielded the survey from March 15th to April 13th, 2016 which took a median of 12 min to complete. GfK employs an address based probability sample that covers 97% of U.S residential postal addresses. (GfK, 2015) GfK panel members participate in an average of two internet surveys monthly, and participation is encouraged with small cash or gift rewards. The GfK panel has been used in other gun survey studies. (Crifasi et al., 2018; Hemenway et al., 2018; Miller et al., 2017; Wolfson et al., 2016)

The reported behaviors of gun owners who engaged in private sales and attitudes about private sellers' responsibility for ensuring safe firearm sales were examined in this survey. Sixty-seven percent of GfK panelists who were randomly selected to take the survey completed it, for a final sample of 1444 gun owners. To present nationally representative estimates, we used survey weights provided by GfK that account for sampling design and nonresponse.

2.2. Measures

2.2.1. Socio-demographics of private sellers

Socio-demographic data on each respondent including age, sex, income, military status, marital status, highest level of education received, race/ethnicity, work status, and income is collected by GfK on all panelists. To ensure that only current gun owners completed the survey, each respondent was first asked whether they personally owned firearms. The survey asked respondents to answer if they "had ever sold one or more of your guns in the private market". Respondents who indicated they had participated were asked additional questions regarding their

behaviors in the private market.

2.2.2. State policy where respondents lived

Comprehensive background check policies and permit to purchase policies were dichotomized, with a '1' representing a state where the policy was implemented in 2016 and a '0' if not. Respondents were classified based on the state where they lived.

2.2.3. Reported behaviors of private sellers

Respondents who self-reported participating in the private market were asked about the number of firearms they sold, whether they ever denied a sale out of concern the firearm would not be used safely, and whether they conducted a background check or required the purchaser to produce a permit to purchase or carry before completing their most recent private sale. Respondents who indicated they checked purchasers' background were asked why they had done so. Response options included: it was required by law for purchasers to pass a background check, it was required for them personally as sellers even though it was not required by the law, or the purchaser volunteered for a background check even though it was not required. If sellers reported they had conducted a background check, the survey included items about whether they conducted the background check on their last sale by contacting police, law enforcement, or an online website.

Because some state background check laws allow individuals to use a permit for concealed carry in place of a purchase license; we combined checking for a purchase license or permit to carry into one variable, checked for a permit, when describing seller behavior. We further collapsed checking for either a purchase license or permit to carry and background checks into one variable to represent a seller checked a purchaser's eligibility when we used this variable to assess the impact of attitudes about responsibility on behavior. For this paper, we used the term 'checked for eligibility' to denote the seller reported doing any of these three behaviors on their last sale. We used 'conducted a background check' to mean the purchaser conducted a background check on the buyer.

We also collapsed the reasons for checking the purchaser for either a purchase license or permit to carry designates the purchaser saw a permit or license.

2.2.4. Attitudes regarding private seller responsibility for checking purchaser eligibility

Respondents were asked to rate the extent to which they agreed with the following statement: "it is the responsibility of gun owners to only sell guns to individuals that they know have passed a background check showing that they, the purchaser, are legally allowed to have a gun." Responses were gathered using a 5-point Likert scale ranging from strongly disagree to strongly agree. We collapsed level of seller agreement that it was their responsibility to check purchasers for eligibility into three categories: agree (from agree and strongly agree), neither agree nor disagree, and disagree (from disagree and strongly disagree).

2.3. Analytic methods

We calculated descriptive statistics to examine the demographics of private sellers and their behaviors in the private market. We also calculated descriptive statistics of levels of agreement that it was a seller's responsibility to ensure individuals were eligible to purchase a gun by reported behavior. These statistics are available in the appendix. We calculated chi-square tests were used to determine if sellers' attitudes were associated with either state comprehensive background check policies or permit to purchase laws. These findings were not significant and are presented in the appendix. We used logistic regression to test for differences in behaviors associated with sellers' perception of responsibility for ensuring purchaser eligibility. We conducted analyses using Stata 14.2 with the *svy* command to account for the survey weights provided by GfK to generate nationally representative results.

(StataCorp, 2018) The Johns Hopkins School of Public Health Institutional Review Board approved this research.

3. Results

3.1. Characteristics of private sellers

Of the 1444 respondents in the survey, 16% (95% CI: 14% to 19%) reported selling a firearm in a private sale (unweighted $N = 238$). The majority of private sellers reported being male (74%, 95% CI: 67% to 81%), married (71%, 95% CI: 63% to 78%), white (80%, 95% CI: 72% to 86%), and an average age of 52.3 years ($SD = \pm 1.4$) (Table 1). A large portion of private sellers reported being a military veteran (31%, 95% CI: 25% to 39%). Less than half of private sellers (46%, 95% CI: 38% to 54%) agreed it was the responsibility of sellers to ensure guns were sold only to eligible purchasers.

3.2. Reported behaviors and attitudes about responsibility of sellers

Respondents who had sold a firearm in the private market most commonly reported selling 1–2 firearms (66%, 95% CI: 58% to 73%). When asked to whom they sold, 13% (95% CI: 9% to 21%) of

Table 1
Descriptive characteristics of private firearm sellers among a national sample of gun owners, $N = 238$.

	Private sellers	95% CI
Age	52.3	49.7 to 54.9
Gender		
Female	26%	19% to 33%
Marital status		
Married/ living together	71%	63% to 78%
Previously married	19%	13% to 25%
Never married	10%	6% to 17%
Education		
Less than high school	9%	5% to 16%
Highschool	31%	24% to 39%
Some college	36%	29% to 44%
Bachelors or higher	23%	18% to 30%
Race/ ethnicity		
White	80%	72% to 86%
Black	5%	2% to 10%
Other	4%	2% to 11%
Hispanic	10%	6% to 17%
2+ races	1%	0% to 3%
Work status		
Employed	59%	51% to 66%
Unemployed	11%	6% to 18%
Retired	23%	18% to 29%
Disabled	7%	4% to 13%
Military status		
Military veteran	31%	25% to 39%
Income		
Less than \$50,000	36%	29% to 44%
\$50,000- \$99,000	40%	33% to 48%
\$100,00 or greater	23%	18% to 30%
State policies		
Lived in a state with a permit to purchase policy	15%	10% to 21%
Lived in state with a comprehensive background check policy	27%	20% to 35%
Belief it was seller responsibility to sell firearm to eligible purchasers		
Disagree	26%	(20% to 34%)
Neither agree nor disagree	28%	(22 to 35%)
Agree	46%	(38% to 54%)

respondents reported selling a gun to a casual acquaintance they did not know well and 16% reported selling to a purchaser they did not know personally (16%, 95% CI: 11% to 22%). Almost half of respondents reported checking a purchaser’s background in some manner (44%, 95% CI: 37% to 52%) and about one-third decided not to complete a firearm sale out of concern that the gun would not be used safely (32%, 95% CI: 25% to 40%).

Among respondents who reported checking a purchaser’s eligibility to buy a firearm, 19% (95% CI: 12% to 27%) checked for a purchase license or permit to carry and 32% (95% CI: 25% to 39%) checked a purchaser’s background. (Table 2). The most common reason reported for checking for a purchase license or permit to carry was because the purchaser volunteered (72%, 95% CI: 45% to 89%) compared to only 6% (95% CI: 1% to 39%) checking because it was required by law. About a third, (32%, 95% CI: 25% to 39%) of respondents who reported conducting a background check did so because it was required by law. Among those who checked purchasers’ backgrounds themselves, many contacted a local law enforcement agency (37%, 95% CI: 20% to 60%) or state police (36%, 95% CI: 16% to 62%). An additional 18% (95% CI: 7% to 38%) did a criminal record check on the internet.

Respondents were asked about their perceptions of the responsibility of individuals engaging in private gun sales to check the eligibility of purchasers (Table 3). Respondents’ perceptions of responsibility were

Table 2
Reported behaviors of private firearm sellers among a national sample of gun owners.

Behavior	Column % (95% CI)	
Number of guns sold in private market ^a		
1–2 guns	66 (58 to 73)	
3–5 guns	17 (12 to 24)	
6–10 guns	14 (9 to 21)	
More than 10	1 (0 to 3)	
Who private guns were sold to ^a		
Family member, friend, or co-worker	69 (61 to 76)	
Casual acquaintance you did not know well	13 (9 to 21)	
A purchaser you did not know personally	16 (11 to 22)	
Ever decided to not sell firearm because worried the gun would not be used safely	32 (25 to 40)	
Checked purchaser for eligibility, any method	44 (37 to 52)	
Checked for eligibility ^b		
Did not check for a permit or conduct a background check	56 (48 to 63)	
Checked for permit to purchase or carry	19 (12 to 27)	
Conducted a background check	32 (25 to 39)	Conducted a background check
	Checked for permit to purchase or carry	
Reason checked for eligibility ^c		
Required by law	6 (1 to 39) ^d	32 (20 to 47)
Required by seller	37 (17 to 62)	44 (30 to 59)
Purchaser volunteered	72 (45 to 89)	24 (14 to 37)
How background checked ^a		
Contacting law enforcement	–	37 (20 to 60)
Contacting state police	–	36 (16 to 62)
Checking criminal record on the internet	–	18 (7 to 38)

^a Numbers will not add to 100% as some refused to answer.
^b Some respondents reported checking for a permit and conducting a background check. Percentages will not add to 100%.
^c Reasons for showing a permit to purchase or carry was select all that apply. As a result, the percentages will sum to greater than 100%.
^d This response was only asked for those who reported checking for a permit to purchase. This item was not included for individuals that checked for a permit to carry.

Table 3

Association between the perception of the responsibility of individuals engaging in private sales to check the eligibility of purchasers and reported behaviors in the private market.

	Variable	Sold a gun in private sale (N = 1424)	Sold more than two guns in a private sale (N = 231)	Checked purchasers' eligibility before a private sale (N = 235)	Denied a gun in private sale (N = 218)
Attitude	<i>Disagree (reference)</i>				
	Neither agree nor disagree	1.18 (0.717 to 1.93)	0.924 (0.363 to 2.35)	1.30 (0.488 to 3.48)	1.99 (0.564 to 7.04)
	Agree	0.518** (0.342 to 0.783)	0.391* (0.168 to 0.906)	4.52** (1.78 to 11.5)	1.43 (0.456 to 4.50)
Age	Age	1.01 (0.995 to 1.02)	0.971 (0.938 to 1.01)	0.934** (0.901 to 0.967)	0.958* (0.920 to 0.997)
Gender	<i>Male (reference)</i>				
	Female	0.622* (0.398 to 0.972)	1.84 (0.781 to 4.33)	2.44 (0.993 to 5.98)	3.22* (1.07 to 9.71)
Marital status	<i>Married or living together (reference)</i>				
	Previously married	1.05 (0.646 to 1.72)	1.69 (0.643 to 4.43)	1.05 (0.419 to 2.63)	2.80 (0.993 to 7.88)
	Never married	0.659 (0.328 to 1.33)	1.77 (0.509 to 6.15)	0.605 (0.169 to 2.16)	13.6** (1.90 to 97.2)
Education	<i>Less than high school (reference)</i>				
	High school	1.10 (0.493 to 2.44)	0.750 (0.157 to 3.59)	0.912 (0.247 to 3.37)	15.4* (1.05 to 225)
	Some college	1.50 (0.672 to 3.31)	0.651 (0.154 to 2.74)	1.00 (0.293 to 3.44)	26.0* (1.83 to 369)
	Bachelor's degree or higher	1.14 (0.489 to 2.63)	0.720 (0.147 to 3.51)	0.885 (0.203 to 3.86)	24.6* (1.58 to 384)
Work status	<i>Employed (reference)</i>				
	Unemployed	0.996 (0.534 to 1.86)	1.60 (0.346 to 7.39)	2.14 (0.460 to 9.99)	6.96* (1.53 to 31.6)
	Retired	0.798 (0.479 to 1.33)	2.57 (0.909 to 7.24)	2.79* (1.02 to 7.61)	2.86 (0.853 to 9.58)
	Disabled	1.15 (0.546 to 2.41)	1.38 (0.216 to 8.79)	1.08 (0.251 to 4.66)	0.120* (0.0181 to 0.790)
Race and ethnicity	<i>White, non-Hispanic (reference)</i>				
	Black, non-Hispanic	0.596 (0.258 to 1.38)	1.60 (0.346 to 7.39)	0.518 (0.106 to 2.54)	0.0703 (0.000683 to 7.23)
	Other, non-Hispanic	1.19 (0.408 to 3.49)	2.14 (0.382 to 12.0)	0.236 (0.0524 to 1.06)	2.29 (0.385 to 13.6)
	Hispanic	0.705 (0.347 to 1.43)	0.192* (0.0428 to 0.863)	0.774 (0.180 to 3.33)	0.700 (0.189 to 2.59)
	2+ races, non-Hispanic	0.707 (0.229 to 2.18)	0.0947 (0.00313 to 2.87)	0.225 (0.0112 to 4.50)	0.0174 (0.000285 to 1.06)
Veteran status	<i>Not a veteran (reference)</i>				
	Military veteran	1.43 (0.907 to 2.27)	0.680 (0.323 to 1.43)	1.65 (0.739 to 3.70)	0.849 (0.336 to 2.15)
Income	<i>Less than \$50,000 (reference)</i>				
	\$50,000 to \$99,999	0.880 (0.552 to 1.40)	1.86 (0.729 to 4.73)	2.27 (0.884 to 5.85)	0.488 (0.139 to 1.72)
	\$100,000 or more	0.551* (0.336 to 0.904)	1.16 (0.384 to 3.48)	1.25 (0.432 to 3.61)	0.560 (0.161 to 1.95)
Sold to	<i>Family member, friend, someone known well (reference)</i>				
	Casual acquaintance or someone not known well	–	1.43 (0.440 to 4.65)	3.83* (1.29 to 11.4)	1.30 (0.406 to 4.17)
	Purchaser did not know	–	1.17 (0.432 to 3.15)	1.39 (0.492 to 3.91)	0.296 (0.0775 to 1.13)
State policy	<i>Does not have policy (reference)</i>				
	Comprehensive background check	0.474* (1.05 to 2.45)	1.47 (0.574 to 3.80)	0.833 (0.346 to 2.01)	0.572 (0.179 to 1.83)
	Permit to purchase	–0.0558 (0.578 to 1.55)	0.980 (0.351 to 2.73)	2.07 (0.713 to 6.01)	0.693 (0.208 to 2.32)

95% confidence intervals in parentheses.

** $p < 0.01$, * $p < 0.05$

associated with both their participation in the private market and their reported behaviors. Respondents who agreed it was the seller's responsibility had 48% (95% CI: 22% to 66%) lower odds of participating in the private market and 61% lower odds (95% CI: 9% to 83%) of selling more than two guns. Respondents who agreed it was the gun seller's responsibility to ensure a purchaser's eligibility had 4.52 (95% CI: 1.78 to 11.5) times greater odds of reporting checking for a permit or conduct a background check on their last sale. There was no significant association between feelings of responsibility and reports of ever denying a sale out of concern the gun would be used safely.

4. Discussion

This study examined the characteristics of gun owners who engaged in private sales, their reported behaviors in the private firearm market, and how perceptions of gun owners' feelings of responsibility correlated with both their involvement in the private sales market and their reported behaviors. Sixteen percent of gun owners had engaged in a private firearm sale, but less than half checked purchasers for their eligibility before selling them a gun. However, among those checking eligibility in a private sale, 32% reported not selling a gun out of concern the gun would not be used safely. Almost 30% who participated in the private market reported selling to either a casual acquaintance or a purchaser they did not know personally, meaning sellers in these transactions were less likely to be aware of a potentially prohibitive condition. Overall, 46% of private sellers agreed that it is the sellers' responsibility to ensure the purchaser is legally allowed to own guns before making a private sale. Perceptions of responsibility were associated with decreased odds of either participating in the private market or selling more than two guns and increased odds of checking purchasers for their eligibility to purchase a firearm.

Twenty-two states opted to fill the federal policy gap and have implemented mandatory background check policies on private sales to ensure purchasers are not prohibited from purchasing a firearm. In our study, living in a state with a comprehensive background check or permit to purchase law was not associated with either private sellers' attitudes or their reported behaviors. These findings are consistent with prior research that found the passage of a policy alone is not always effective in increasing background checks. (Castillo-Carniglia et al., 2017; Castillo-Carniglia et al., 2019).

Our findings suggest that programs or campaigns to increase private sellers' feelings of responsibility to ensure purchasers are eligible to buy a firearm may increase the number of background checks conducted in the private market. Feelings of responsibility to ensure firearms are only sold to individuals who were eligible to purchase a gun was significantly associated with gun owners checking purchasers' backgrounds in their last private sale (e.g., either through a background check or checking a permit). We found that 44% of respondents checked a purchaser's background because they (the seller) required it, not because it was required by law, suggesting these programs and campaigns promoting responsible sales practices could be effective even in the absence of policies requiring background checks for private sales. Future research should explore who to effectively frame messages to increase perceived responsibility of sellers in the private market.

In addition to the development of communications campaigns or educational programs, these results could also be utilized to improve implementation of state background check policies in an effort to increase their effectiveness. Studies of other gun policies, Extreme Risk Protective Order laws, found that lack of knowledge about these policies can impair implementation (Frattaroli et al., 2019; Frattaroli et al., 2015) and that programs supporting policy implementation may increase the number of protective orders filed. (Pallin et al., 2020) In the context of our findings, improving knowledge of private sale background check laws and responsible sales practices could increase compliance by broadening a policy's reach to individuals who either did not know about it or chose to not follow it. Campaigns or targeted

messages intended to increase perceptions of seller responsibility could present information about state background check laws together with messages about it being the seller's responsibility to ensure purchasers are eligible to buy a firearm. The information could be available on background check sites, police stations, gun stores, or other locations individuals get information about their state policy.

Our findings also suggest to whom health communications or mass media campaigns intending to change perceptions of responsibility should be targeted. Having sellers' perceptions of responsibility mirror those of gun owners who did not participate in the private market may result in more background checks in the private market. Programs could target individuals who are significantly less likely to check purchasers for eligibility such as men, younger sellers, and those selling to a casual acquaintance or someone they did not know well. Additionally, those who sold more than two guns in the private market reported being less likely to agree compared to private sellers who sold fewer. To reach individuals who sell more firearms in the private market, websites or venues that facilitate connections for private firearm sales could include language about responsible sale practices to reduce the likelihood that guns are sold to prohibited individuals. Further research should also examine if campaigns or health communications targeted to change perceptions of responsibility would result in increases in responsible sales practices in the private market.

Our study also suggests that veterans are disproportionately represented as selling firearms in the private market. While veterans are estimated to make up approximately 10% of the US population, they comprised 31% of gun owners who reported engaging in private sales in our study. (Bialik, 2017) When considering avenues to impact the private sales market, policymakers or advocates could partner with the Veteran's Administration or other local veteran's groups to craft messages related to responsible behaviors in the private market. Prior research found that veterans were among the best messengers regarding safe gun storage. (Crisafi et al., 2018) Additionally, in the absence of policy change, veterans could also serve as messengers to speak about responsible sales practices in an attempt to shift attitudes. Future studies should explore messaging related to responsible sales, acceptability of these messages, and the impacts on behavior.

In addition to informing campaigns and programs, understanding how private sellers check eligibility can guide the creation of programs or services private sellers would use. Background checks were the most commonly reported method of checking purchasers for eligibility in the private market. Nearly three-quarters of those who checked for eligibility reported background checks as being at least one method they used, and nearly three-quarters of those individuals reported using law enforcement or state police to facilitate the check. Additionally, checking a purchase license or permit to carry is unlikely to incur cost for the private seller and, if the license/permit is valid, may facilitate background checks in the private market as the purchaser had to undergo one to obtain the license/permit. Future research should explore different strategies for sellers to check purchasers' backgrounds in the private market and how likely those sellers would be to use a given strategy.

4.1. Limitations

There are some limitations to consider with our results. A limitation to our findings is the possibility of social desirability bias. The utilization of the internet to ask sensitive questions and the anonymity of the survey likely reduced this bias. (Kreuter et al., 2008) Another important consideration, as with all internet surveys, is selection bias in participation. GfK reduces this bias through utilization of probability-based samples. Additionally, potential respondents were not informed of the specific topic in the invitation to participate. The survey includes weights to make the original sample nationally representative of the U.S. population and includes corrections for known nonresponse. We could not independently examine the differences between responders and non-responders as GfK did not provide data on non-responders. Our survey

did not define the term ‘responsibility’. It is possible that respondents defined this term differently depending on their state’s firearm policy environment. However, we did not find an association between a respondent’s policy environments and their reported level of agreement, as shown in the supplemental analysis presented in the appendix. We classified a respondent’s state based on where they were living, not where their last gun sale occurred, which could influence the associations with both state comprehensive background check policies and permit to purchase policies. Additionally, the relatively small sample size of this survey limits the ability to make inferences, particularly regarding the impact of law presence and attitude. Future research should further explore how laws and characteristics of a private sale (e.g. method of introduction between private sellers and purchasers) influence behaviors of gun sellers in the private market. Finally, this sample was drawn in 2016, so attitudes and behaviors may have changed. Future research should explore this in more recent samples.

5. Conclusion

Our findings highlight that private sellers’ feelings of personal responsibility to ensure firearms are sold to eligible individuals may help increase responsible sales practices in the private market. Campaigns and initiatives that target gun owners’ attitudes to increase responsible behavior may increase background checks in a private market.

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Credit statement

Authors CKC, EEM, CLB, and DWW contributed to the funding acquisition and data curation. MMF and CKC conceptualized this study’s research questions. All authors contributed to the analysis and/or interpretation of the data, as well as the drafting and/or revising the article. All authors approved the final version for publication.

Declaration of Competing Interest

None.

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Appendix A. Supplementary data

Supplementary material.

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