

Baltimore's Underground Gun Market: Availability of and Access to Guns

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Abstract

Underground gun markets can create opportunities for individuals who are prohibited from gun ownership to gain access to guns. Understanding how these individuals obtain guns, and their unsuccessful attempts to get guns, is key to developing interventions that effectively restrict the supply of guns in an underground market. We conducted surveys of criminal justice-involved men ($n=195$) in Baltimore City about their experiences in the underground gun market, of whom 30% reported having any experience in the underground gun market. More than half of these individuals were unsuccessful in their most recent attempt to obtain a firearm due to cost- or source-related barriers. Over 80% of individuals who did not already have access to a gun but wanted one (31/38) reported wanting to acquire one for safety or protection. Thirty-one percent (18/58) reported there were certain gun shop employees who sell guns off the record or make sales to obvious straw purchasers. Most respondents who had access to firearms had handguns (90%). Individuals reported selling or trading a gun ($n=35$) for money (69%), drugs (46%), or other guns (23%), or accepting guns as payment for drugs. Although an underground market can facilitate access to firearms, barriers exist that can prevent acquisition by high-risk individuals. Efforts should focus on strategies that increase accountability and restrict the supply of guns in an underground market or those that provide alternatives to gun carrying to feel safe.

Keywords: guns, underground market, acquisition, policy

Introduction

GUN VIOLENCE REPRESENTS one of the leading causes of premature death in the United States. In 2017, 14,542 people died from gun homicide (CDC 2019) and more than 480,000 individuals were victims of violent crimes committed with guns (BJS 2018). Gun violence often involves perpetrators who are prohibited from legally possessing firearms due to prior criminal convictions, current restraining orders, or young age (Braga and Cook 2016). Successfully keeping guns from these high-risk individuals begins with understanding how they typically obtain firearms and documenting unsuccessful attempts to acquire a firearm. No single source of data is adequate for this task, but a picture emerges from a synthesis of data from surveys of individuals who committed crimes with guns, traces of guns used in crime, law enforcement investigations of gun trafficking cases, and observational studies of licensed and unlicensed gun sellers.

Data from a nationally representative study of U.S. gun owners in 2015 estimated 265 million privately held firearms, 70 million transfers between civilians, and 2.3 million firearms stolen over the previous 5-year period (Azrael et al. 2017). The large stock and flow of guns along with thefts present many opportunities for guns to be diverted into an underground market. A 2016 nationally representative survey of individuals who were incarcerated found that 25% of those arrested for a gun crime acquired their guns from a friend or family member; 43% from the street or underground market; 10% from a retail outlet (e.g., gun store or pawn shop); and 6% through theft (BJS 2019).

Research has shown that reducing high-risk individuals' access to firearms can reduce violence (Vigdor and Mercy 2006; Webster et al. 2004, 2014; Wintemute et al. 2001; Zeoli and Webster 2010) and policies that enhance firearm seller accountability have been effective at reducing diversion of guns for use in crime (Pierce et al. 2012; Webster

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and Vernick 2013; Webster et al. 2009, 2013). Handgun purchaser licensing, one type of policy that may enhance firearm seller accountability, requires prospective handgun purchasers to apply to state or local law enforcement agencies to undergo a thorough background check and obtain a license; purchaser licensing is often completed in person and entails fingerprinting. Research has consistently found that these laws are associated with protective effects against gun homicide (Crifasi et al. 2018; Hasegawa et al. 2019; Rudolph et al. 2015; Webster et al. 2014) and diversion of guns into the underground market (Webster et al. 2009, 2013). In 2013, Maryland enacted the Firearm Safety Act (FSA) to increase accountability for firearm sellers by requiring prospective handgun purchasers to obtain a license and introduced a mandatory loss/theft reporting requirement for gun owners. The implementation of the FSA was associated with a reduction in the diversion of guns into the underground market in Baltimore, and individuals involved in Baltimore's underground market specifically cited the need for handgun purchasers to obtain a license as a barrier to obtaining guns (Crifasi et al. 2017).

Situations in which an individual wants to obtain a gun but is prevented from doing so provide key information about gun markets. A previous study that examined underground gun market perceptions in Chicago found that safety and protection are significant drivers to illegal firearm acquisition (Barragan et al. 2016). Understanding perceptions of and involvement in Baltimore's underground gun market can inform the development of tailored interventions that more effectively disrupt the diversion of guns for use in crime. Moreover, given the lethality of firearms compared with other weapons used in violence, reducing high-risk individuals' access to firearms would also likely reduce the number of people killed in homicides (Cook and Pollack 2017). The goal of this study was to understand the perceptions of and experiences with Baltimore's underground gun market among criminal justice system-involved men about both the acquisition of guns that are desirable, affordable, and sold by someone trustworthy and barriers to acquiring those guns. We examined an all-male sample because men are disproportionately affected by firearm homicides and law enforcement incidents involving firearm deaths (Geier et al. 2017), and men are also disproportionately the perpetrators of firearm violence (FBI). By examining male perceptions with Baltimore's underground gun market, we sought to understand how guns move through illicit markets and barriers that can prevent unlawful acquisition.

Materials and Methods

Study design

This cross-sectional study was designed to describe the experiences with and perceptions of the underground gun market among criminal justice system-involved men in Baltimore City. We surveyed men ($n=195$) in Baltimore City on parole or probation between the months of May and August 2016. Surveys were administered using an Audio-Computer Assisted Survey Instrument (A-CASI).

Respondents

Study inclusion criteria were as follows: being male; aged 18 years or older; currently on parole/probation; and cur-

rently residing in Baltimore City. Having a criminal history related to guns or gun violence was not incorporated into the inclusion criteria with the aim of increasing the breadth of individuals' experiences with attempting to obtain guns in the underground market among the study sample. We wanted to include study participants who had wanted to obtain a gun but were unable to acquire one to understand barriers that exist in Baltimore's underground market.

Study procedures

Respondents were recruited in public spaces directly outside of seven parole/probation centers across Baltimore City. Study staff worked in the same pairs in the same locations to reduce the likelihood a participant would be recruited to complete the survey more than once. Study staff approached men as they exited the sites and provided a brief overview of the study ($n=448$). Interested individuals were then screened ($n=251$) to determine eligibility ($n=216$).

Respondents completed informed consent and, if enrolled, subsequently completed the survey via A-CASI (final sample $n=195$). Table 1 provides the response rate for the study. The screening, informed consent, and interview process took ~30–45 min. Study staff were available to answer any questions or address technical issues. Respondents were compensated with a \$50 gift card.

Survey instrument

All respondents were asked questions relevant to demographics and prior gun violence victimization. Questions pertaining to respondents' activities relevant to gun acquisition and transfers focused on activities within the prior 6 months. These questions covered topics including gun ownership, borrowing and sharing, attempts to acquire a gun, whether the most recent attempt was successful, and reasons for unsuccessful attempts. In addition, those who were active in the underground gun market were asked how the guns were obtained and where they were stored; and experience selling guns, including items for which guns were sold/traded.

The survey questions were divided into four modules: (1) access to and desire for guns in the past 6 months; (2) respondents' gun purchasing activities; (3) respondents' gun selling activities; and (4) the number and types of guns to which respondents had access. For access to and desire for guns in the prior 6 months, respondents were asked questions related to whether they owned or borrowed guns, whether they wanted to acquire a gun, how many times they attempted to acquire a gun, whether their most recent attempt was successful, and, if unsuccessful, the reason why. Respondents were asked whether they had asked someone to buy a gun on their behalf and if they were successful in

TABLE 1. SURVEY RESPONSE RATES

	n	%
Men approached and given a survey overview	448	100
Men who indicated interest in the survey and were screened	251	56
Men deemed eligible to take the survey	216	48
Survey participants	195	44

their purchase attempt, whether they had bought a gun on the street, if they had a readily available source for guns and their connection to the source, and whether there were certain gun shops in Maryland where it was easier to steal guns or where employees would sell guns off the record. Access to firearms was measured by questions about how many guns to which respondents had easy access and what types of guns they were, how they obtained the gun, where it was normally stored, and where the gun was at the time of the survey. To examine gun selling, respondents were asked whether they had ever sold or traded a gun and how many, the items for which guns were sold or traded, and whether they had ever been offered a gun as payment for drugs and whether they accepted the offer. Survey items were informed by previous qualitative research conducted with individuals who were incarcerated in other jurisdictions (Barragan et al. 2017; Collins et al. 2017; Cook et al. 2015).

Analytic methods

We generated descriptive statistics to describe respondents' experiences in Baltimore's underground gun market. Analyses were conducted in Stata version 14.2 (StataCorp 2015). This study was reviewed and approved by the Johns Hopkins Bloomberg School of Public Health Institutional Review Board.

Results

Among our sample of adult men ($n=195$) on parole/probation in Baltimore, 80% were African American, 74% were unemployed, and 63% had been shot at one or more times. The complete demographic characteristics and experiences with violence, and their perceptions of the impact of Maryland's FSA, are presented in detail elsewhere (Crifasi et al. 2017).

Respondents' access to firearms during the prior 6 months is presented in Table 2. Twenty-seven percent of respondents had access to a gun through direct ownership (14%) or borrowing (12%). Of those who did not already have access to a gun in the prior 6 months ($n=140$), 27% wanted to get one ($n=38$) with the majority wanting to get a gun for safety or protection (81%). Among the entire sample, 30% (58/195) had tried to get a gun in the previous 6 months; of these, 45% had tried once, 19% tried twice, and 17% tried three or more times to get a gun. Of those who had tried to get a gun, 53% (31/58) indicated that the most recent attempt was unsuccessful. Among the reasons why the most recent attempt was unsuccessful ($n=31$), lack of source or supply was most common (48%) and the gun being too expensive was the second most common (23%).

Table 3 presents the gun purchasing practices and perceptions of the 58 respondents (30%) who had attempted to acquire a firearm at least once during the 6 months before the survey. Respondents were asked, if they had the money available, was there someone to whom they could go to get a gun: 52% (30/58) responded "yes" and nearly all of those were through a direct connection (29/30). In the prior 6 months, 45% (26/58) of respondents with some activity in the underground gun market (13% [26/195] of all respondents) had tried to buy a gun from someone who is known for selling guns on the street. Ten of these 58 respondents (17%) had asked someone to buy a gun from a gun shop or

TABLE 2. PARTICIPANTS' ACCESS TO AND DESIRE FOR FIREARMS IN THE LAST 6 MONTHS ($N=195$)

	n	% ^a
In the last 6 months, did you own a gun or did someone allow you to use their gun?		
Owned	28	14
Borrowed	24	12
No	140	72
Refused to answer	3	2
For those who did not already have access, did you ever want a gun in the last 6 months? ($n=140$)		
Yes	38	27
No	101	72
Refuse to answer	1	1
Why did you want a gun? ($n=38$)		
Protection	26	68
Safety	5	13
Other	5	13
Refuse to answer	2	5
How many times in the last 6 months did you try to get a gun? ($n=58$ who reported attempting to get a gun)		
Once	26	45
Twice	11	19
Three or more	10	17
Don't know	5	9
Refuse to answer	6	10
Was the most recent attempt successful? ($n=58$)		
Yes	24	41
No	31	53
Refuse to answer	3	5
If it wasn't, why not? ($n=31$)		
Too expensive	7	23
Lack of supply	2	6
No source	13	42
Other	2	6
Refuse to answer	7	23

^aBecause of rounding, percents may not sum to 100.

pawn shop on their behalf, five of whom were able to obtain a gun in this way. Thirty-one percent of active underground gun market respondents (18/58) reported there were certain employees at gun shops who would sell guns off the record or make sales to obvious straw purchasers. Additionally, 24% (14/58) reported that there are gun shops in Maryland that are known to make it easier to get guns without a background check and 16% said there were gun shops from which it was easier to steal guns.

Ninety percent of respondents with access to a firearm reported having access to one or more handguns (Table 4). Of those with access to firearms, 40% had access to one gun, 15% had access to two guns, and 35% had access to three or more guns. Twenty-nine percent of respondents with access to a firearm (17/58) kept their firearm(s) where they were staying; others stored it outside (19%) or at a friend's house (12%). In response to the question, "Where is the gun right now?," 48% (28/58) indicated that they were no longer in possession of the firearm. Twenty-two percent had their gun confiscated by police when they were arrested, an additional 9% said they threw it away because they were about to be arrested, and 17% had sold or loaned the gun to someone else. The most common

TABLE 3. PARTICIPANTS' GUN PURCHASING IN BALTIMORE'S UNDERGROUND MARKET (N=58)

	n	% ^a
Have you ever asked someone to buy a gun from a gun shop or pawn shop on your behalf?		
Yes	10	17
No	46	79
Refuse to answer	2	3
Did that person buy the gun for you? (n=10)		
Yes	5	50
No	5	50
In the last 6 months, have you tried to buy a gun from someone who is known for selling guns on the street?		
Yes	26	45
No	31	53
Refuse to answer	1	2
If you had the money and you wanted to buy a gun today, is there someone you would go to?		
Yes	30	52
No	27	47
Refuse to answer	1	2
Do you have direct connection to this person or would you go through someone else?		
Direct connection	29	50
Go through someone else	17	29
Refuse to answer	12	21
Are there gun shops in Maryland that are known to be easier to get guns without background check or records to connect you to the gun?		
Yes	14	24
No	35	60
Don't know	9	16
Are there gun shops in Maryland that are known to be easier to steal guns from?		
Yes	9	16
No	38	66
Don't know	11	19
Are there certain employees at these shops that will sell guns "off the books" or who will allow "straw purchases" when someone puts the gun in their name though it is clear the gun is being bought for someone else?		
Yes	18	31
No	11	50
Don't know	29	19

^aBecause of rounding, percents may not sum to 100.

ways in which respondents obtained their guns were by purchasing (30%), borrowing or sharing (18%), and stealing (14%). Others reported acquiring firearms as gifts (11%), or through trades (9%).

Eighteen percent of the respondents (35/195) and 60% of those who were active in the underground gun market (35/58) reported that they had sold or traded guns in Baltimore's underground market (Table 5). Most who sold or traded guns did so with more than one gun; 37% had sold or traded two guns, and 46% had sold or traded three or more guns. Respondents sold or traded guns for a variety of items including money (69%), drugs (46%), and other guns (23%). Forty-seven percent (27/58) had been offered a gun as payment for drugs and 89% (24/27) accepted the trade.

TABLE 4. PARTICIPANTS' ACCESS TO FIREARMS IN THE PAST 6 MONTHS (N=58)

	n	% ^a
In the last 6 months, how many guns did you have easy access to?		
One	23	40
Two	10	17
Three or more	20	35
Refuse to answer	5	9
What kind of gun did you have access to?		
Handgun	52	90
Shotgun	3	5
Refuse to answer	3	5
How did you get this gun? (n=56)		
Stole it	8	14
Rented it	1	2
Borrowed it	7	13
Was holding it for someone	2	4
Sharing	2	4
Traded something for it	5	9
Bought it	17	30
Bought for me by someone else	1	2
Given to me as a gift	6	11
Refuse to answer	7	13
Where did you normally keep this gun?		
Where you were staying	17	29
In a friend's house	7	12
In a group's house	2	3
In your girlfriend's house	3	5
In your car	3	5
Outside	11	19
Other	6	10
Refuse to answer	9	16
Where is the gun now?		
Someone else is keeping it for you	5	9
Police confiscated it during an arrest	13	22
Threw it away because being arrested	5	9
You still have it	7	12
You sold it to someone	7	12
You loaned it to someone	3	5
Don't know	8	14
Refuse to answer	10	17

^aBecause of rounding, percents may not sum to 100.

Discussion

To our knowledge, this study is the first to describe how individuals access firearms in Baltimore's underground gun market, including their involvement in purchasing, stealing, trading, or selling firearms. Importantly, it is one of the few studies to assess unsuccessful attempts at acquiring guns, and associated reasons, in the underground market. This important context is key to elucidating nuances in acquiring guns in an underground market and understanding the role of source and supply. Thirty percent of the individuals in our sample had some form of access to guns or experience in the underground gun market in the 6 months before the study, a period in which Baltimore's homicide rate was higher than that of any other city with a population over 500,000. While those who did not have access to a gun but wanted to get one in the prior 6 months reported a protection or safety as the driver, it is remarkable to note that during

TABLE 5. PARTICIPANTS' GUN SELLING IN BALTIMORE'S UNDERGROUND MARKET (N=58)

	n	% ^a
Have you ever sold or traded a gun?		
Yes, sold	21	36
Yes, traded	8	14
Yes, sold and traded	6	10
No	22	38
Refuse to answer	1	2
How many guns would you say you have sold or traded? (n=35)		
One	4	11
Two	13	37
Three or more	16	46
Don't know	1	3
Refuse to answer	1	3
For which of the following have you ever sold or traded a gun? (n=35) Check all that apply		
Food/household items/children's item/clothes or shoes	7	20
Drugs	16	46
Money	24	69
Other guns	8	23
Other	1	3
Have you ever been offered a gun as payment for drugs		
Yes	27	47
No	28	48
Refuse to Answer	3	5
Have you ever accepted the gun as payment for drugs (n=27)		
Yes	24	89
No	3	11

^aBecause of rounding, percents may not sum to 100.

this time of high violence, 70% of this high-risk group did not have access to firearms.

Prior research has found that illegal transactions, including those that occur in the underground market, play a large role in arming high-risk individuals (Cook and Pollack 2017). Our study is consistent with these findings; several respondents reported obtaining firearms through someone committing a straw purchase on their behalf or from private sales without a background check.

Additionally, dealers who are engaged in illegal transactions or are otherwise sources of guns used in crime are a potential intervention point (Wintemute 2017). Survey respondents reported knowing of shops where it was easy to steal guns or those which had employees who were willing to make off-the-record sales or obvious straw purchases. Greater regulation, training, and accountability for gun shops that are regular suppliers of guns used in crime or that have been targets of theft could reduce the supply of guns into an underground market (Webster et al. 2006, 2009, 2013).

Our study also highlights the important interplay between drugs and guns in Baltimore. Among the survey respondents who had ever sold or traded a gun, nearly half had accepted drugs as payment. Additionally, nearly half had been offered a gun as payment for drugs and nearly all accepted. This is consistent with prior research finding a strong relationship between drugs, guns, and the potential for violence (Dickinson 2015; Goldstein 1985; Seigny and Allen 2015). With the current opioid epidemic, better understanding how

guns and drugs move together or in exchange through an underground market is an important area of future research.

While a quarter of respondents had access to a gun in the prior 6 months, it is important to note that over 50% of individuals who did not have a gun but attempted to get one were unsuccessful in their most recent attempt. The inability to acquire a gun was often due to a lack of either a source or resources to pay for one. Additionally, it was common for those with firearm access to have their gun confiscated by police or to discard a gun in their possession when they were about to be arrested. These findings challenge the notion that criminals have easy access to guns and that laws designed to restrict criminals' access to firearms are pointless due to guns available in underground markets. Respondents' lack of access to guns in the prior 6 months is consistent with recent research examining illegal gun acquisition by criminal justice-involved individuals in Chicago finding that most gun offenders did not have access to guns in the 6 months before their arrest (Cook et al. 2019). This short time between acquisition and use suggests the need for better enforcement of laws that target illegal transactions to help reduce gun violence.

Limitations

This study is subject to some limitations. We used a convenience sampling strategy to recruit respondents as they exited parole and probation centers. While these individuals were involved in the criminal justice system, they were not necessarily prohibited from gun ownership as our inclusion criteria did not require an individual to be prohibited. As a result, it's possible some in the sample could lawfully obtain firearms; however, we asked specifically about involvement in unlawful attempts to obtain firearms to get a sense of their involvement in the underground market. Our sample may not be fully representative of experiences with and perceptions of Baltimore's underground gun market, and the findings may not be generalizable to other urban, underground gun markets. Specifically, we did not sample women on parole/probation, and there may be important differences in the way women interact with and perceive the underground gun market compared to men. Future studies would benefit from examining gender differences in underground gun market experiences and perceptions. Social desirability bias is also a potential issue since these were criminal justice system-involved individuals; however, the rich information we received on survey respondents' behaviors and access to firearms, and the anonymous way the survey was conducted, limits this concern. The study is descriptive in nature, limiting our ability to test for any causal relationships. Finally, there is the possibility that there are important but unmeasured differences between those who participated in the study and those who did not.

Conclusion

The results of this study provided a brief profile of Baltimore's underground gun market and motivations for involvement among those engaged in the market. Although the underground gun market can facilitate illegal access to guns, results of this study highlight the role of gun laws in creating barriers such as limiting the supply or sources of guns. Most respondents reported wanting to get a gun for safety or protection. Enforcement and public health strategies that reduce or prevent violence may lead to reductions

in the perceived need to carry guns for protection and provide alternatives to increase perceptions of safety.

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