

Gunshot Detection Technology (GDT): Community Survey Results

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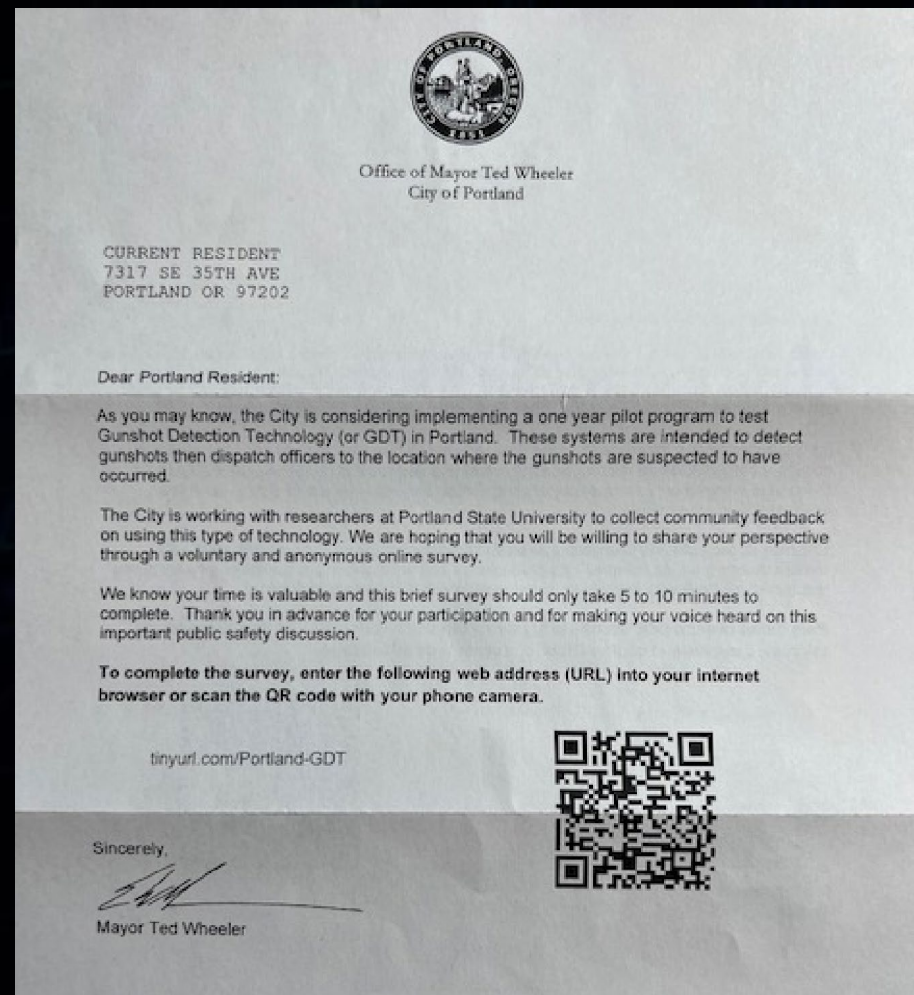
Methodology – Random Sample

1. Used data from the PPB’s open data portal to identify 23 neighborhoods with the highest rate and count of shooting incidents over the past four years (i.e., verified shots fired in the city)

Neighborhood	Count of Incidents				Rate per 1,000
	2019	2020	2021	2022	Avg. Annual
Argay	7	29	37	19	3.6
Centennial	26	70	82	58	2.3
Cully	21	42	44	44	2.8
Downtown	4	21	26	41	1.6
Eliot	12	19	39	32	4.6
Glenfair	5	13	16	17	3.5
Hazelwood	36	74	115	138	3.4
Humboldt	4	12	19	16	2.3
Kenton	7	17	15	23	1.9
King	10	24	31	23	3.3
Lents	24	45	71	66	2.3
Madison South	9	20	25	33	3.0
Mill Park	8	16	18	25	1.8
Montavilla	20	37	44	42	2.1
Mt Scott-Arleta	2	12	31	35	2.5
Old Town/Chinatown	10	12	38	45	6.3
Parkrose	10	34	57	32	5.3
Piedmont	8	15	27	21	2.5
Portsmouth	17	23	34	39	2.8
Powellhurst-Gilbert	28	67	88	107	2.2
St Johns	14	30	36	42	2.4
Wilkes	8	19	27	24	2.1
Woodlawn	2	16	21	17	2.7

Methodology – Random Sample

2. Selected a random sample of 10,000 households from the 23 neighborhoods
 - Estimated 8.9% of households
3. Mayor's office mailed an invitation letter to each address
 - Brief description of GDT
 - Purpose of the survey
 - Tiny URL and QR code linking to the online survey hosted at PSU
 - English & Spanish versions available



Methodology – Random Sample

4. Online survey cover page

- Possible pilot test in Portland
- Described what GDT does
- Estimated cost (\$70,000 to \$85,000 per square mile)
- Voluntary participation and anonymous

5. Available in English and Spanish

6. Fully mobile phone compatible

7. Open for 32 days

8. 974 valid responses (9.7% response rate)

- Removed cases where no questions were answered



English ▾

Dear Resident,

Portland is considering a 12-month pilot test of Gunshot Detection Technology (GDT) to help address gun violence in the city. GDT involves the use of electronic devices to detect and locate outdoor gunfire. The devices are usually installed on telephone poles or other tall objects in high-crime areas of a city. When a suspected firearm discharge is detected the system alerts the police so they can respond as quickly as possible.

The pilot test the City Council is considering would be limited to roughly four square miles across multiple locations. The cost for GDT systems and monitoring can vary significantly, but generally range from \$70,000 - \$85,000 per square mile per year.

The Council is interested in hearing from community members prior to making a final decision about investing in GDT. Your household was selected along with others to speak for our community. As such, your participation is critical to ensure that the results accurately represent the opinions of people living in Portland.

Please take 5 minutes to complete our online survey. We ask about your opinion of GDT, any concerns that you might have, and your thoughts on public safety in your neighborhood. The survey is completely anonymous and cannot connect your answers to your identity. Participation is also voluntary and you may skip questions or withdraw at any point. We ask that just one adult per household completes the survey.

Sincerely,

Mayor Ted Wheeler

NOTE: You can print this page or save it to your computer to keep for your records. If you have questions about the survey please contact the Principal Investigator, Dr. Kris Henning at Portland State University. 503-725-8520 -or- khenning@pdx.edu

Start the survey by 'clicking' NEXT below

>> Next - Adelante

Methodology – Open Sample

1. Mayor's office and other city officials distributed a separate open survey link

- Community groups
- Neighborhood associations
- Business associations
- City council offices

2. Open for 22 days

3. 773 valid responses

- Response rate cannot be calculated because we do not know how many people received the invitation

➤ Random samples will usually generate data that more accurately represents the opinions of the target population (i.e., people living in the 23 neighborhoods selected)



Methodology – Demographics

Younger residents (18 to 34), Asians, Blacks/African-Americans, and Hispanics/Latinos are underrepresented in the random and open samples

The theoretical error rate in the random sample is ± 3%

- Does not account for non-response bias
- The survey findings may not accurately generalize to all adult residents

	2020 Census / 2021 ACS	Random Sample	Open Sample
Sex¹			
Female	51%	52%	52%
Male	49%	48%	48%
Gender			
Female		48%	49%
Male		45%	45%
Non-binary		5%	4%
Trans-gender		1%	1%
Prefer to self-describe		3%	2%
Age¹			
18 to 24	9%	2%	2%
25 to 34	23%	17%	18%
35 to 44	21%	30%	35%
45 to 54	17%	21%	23%
55 to 64	13%	13%	10%
65 or older	17%	17%	12%
Race/Ethnicity²			
American Indian or Alaska Native	1%	1%	0%
Asian	11%	3%	2%
Black or African-American	9%	2%	3%
Native Hawaiian or other Pacific Isl.	1%	0%	0%
Some Other Race	1%	3%	2%
White	56%	79%	80%
2 or More Races	7%	4%	5%
Hispanic or Latino	16%	8%	7%

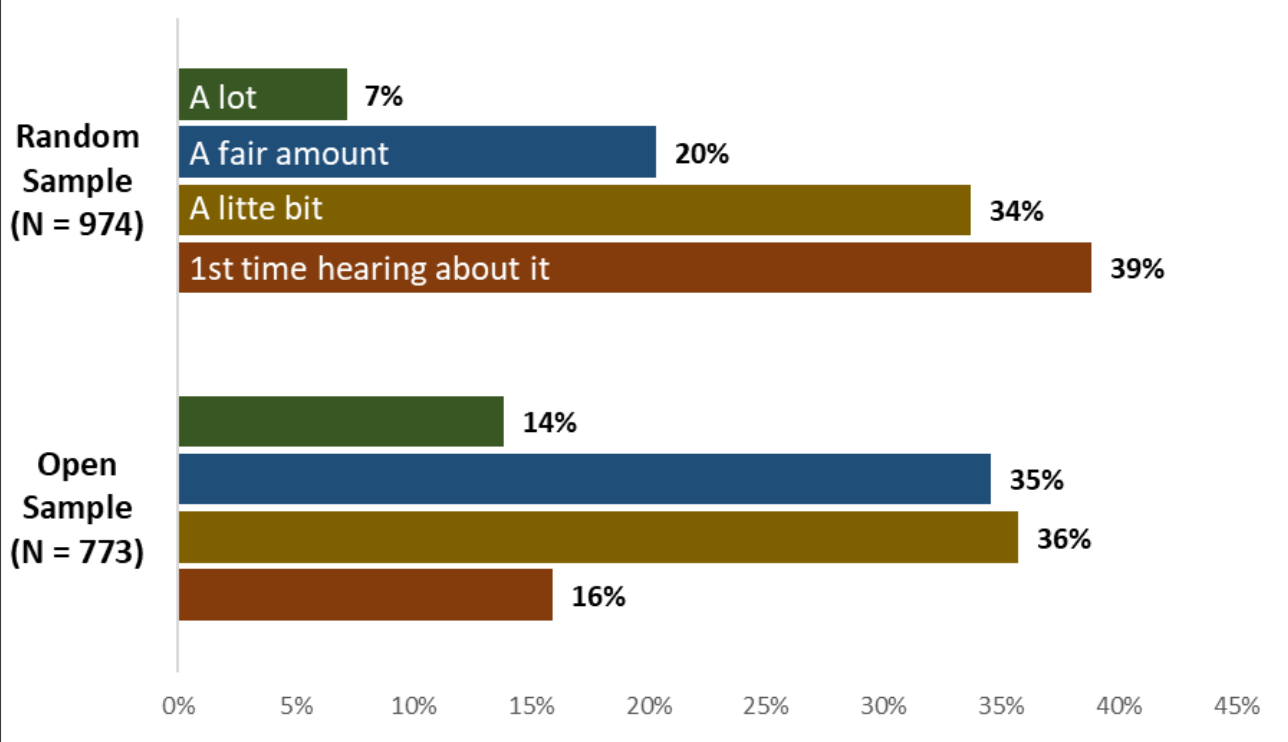
¹2021 American Community Survey for adults in city as a whole.
²Neighborhood estimates based on the 2020 Census (PSU Population Research Center).
 Note: Excludes cases missing demographic data.

Prior Exposure to GDT

The majority of people responding to the random sample had little to no prior exposure to GDT

People from the open sample were more likely to know something about GDT before receiving the survey

How much did you know about GDT prior to this survey?

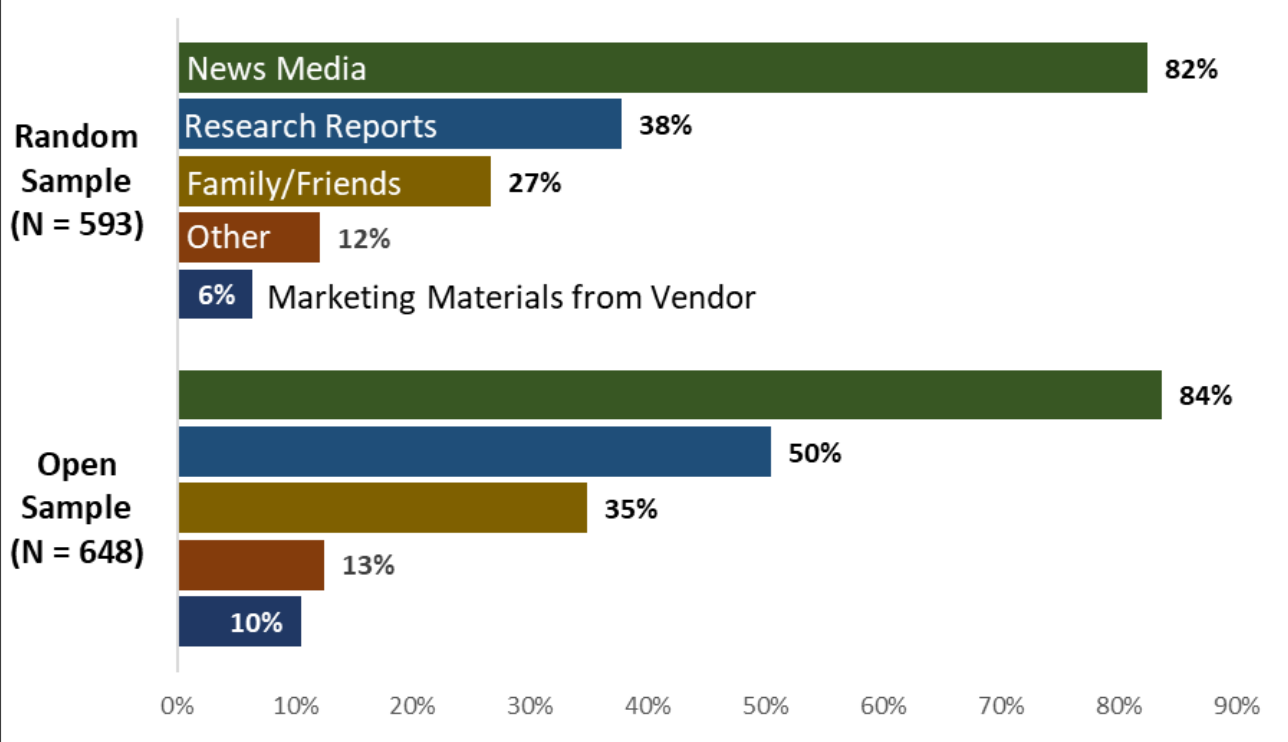


Prior Exposure to GDT

Among those with prior knowledge of GDT, the most common source used in learning about this technology was the news media (e.g., TV news, newspaper, radio)

People from the open sample were more likely to say they had accessed research reports addressing GDT (e.g., scientific journals, technical reports)

Which of the following sources have you used to learn about GDT? [check all that apply]

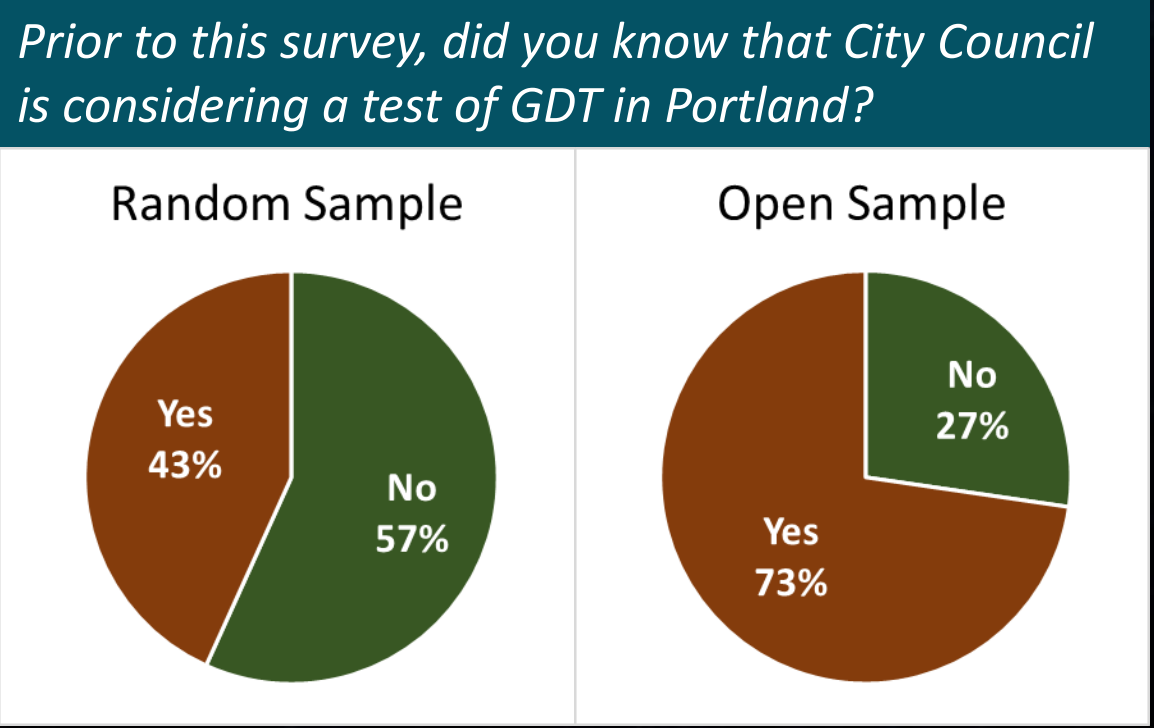


Note: Only includes people who had previously heard about GDT. Does not add to 100% because people could list multiple items.

Prior Exposure to GDT

The majority of people in the random sample did not know that City Council is considering a pilot test of GDT

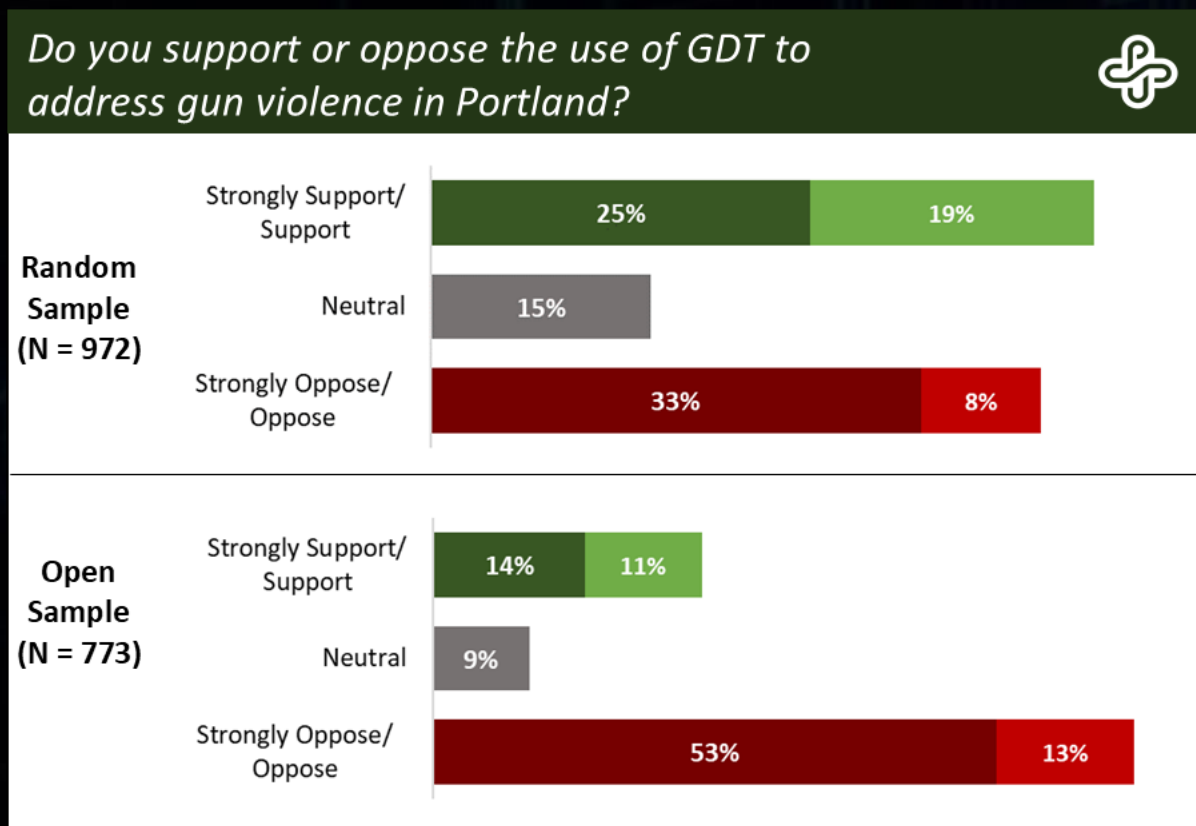
A significantly higher proportion of respondents in the open sample knew that a pilot test of GDT was being considered



Support/Opposition to GDT

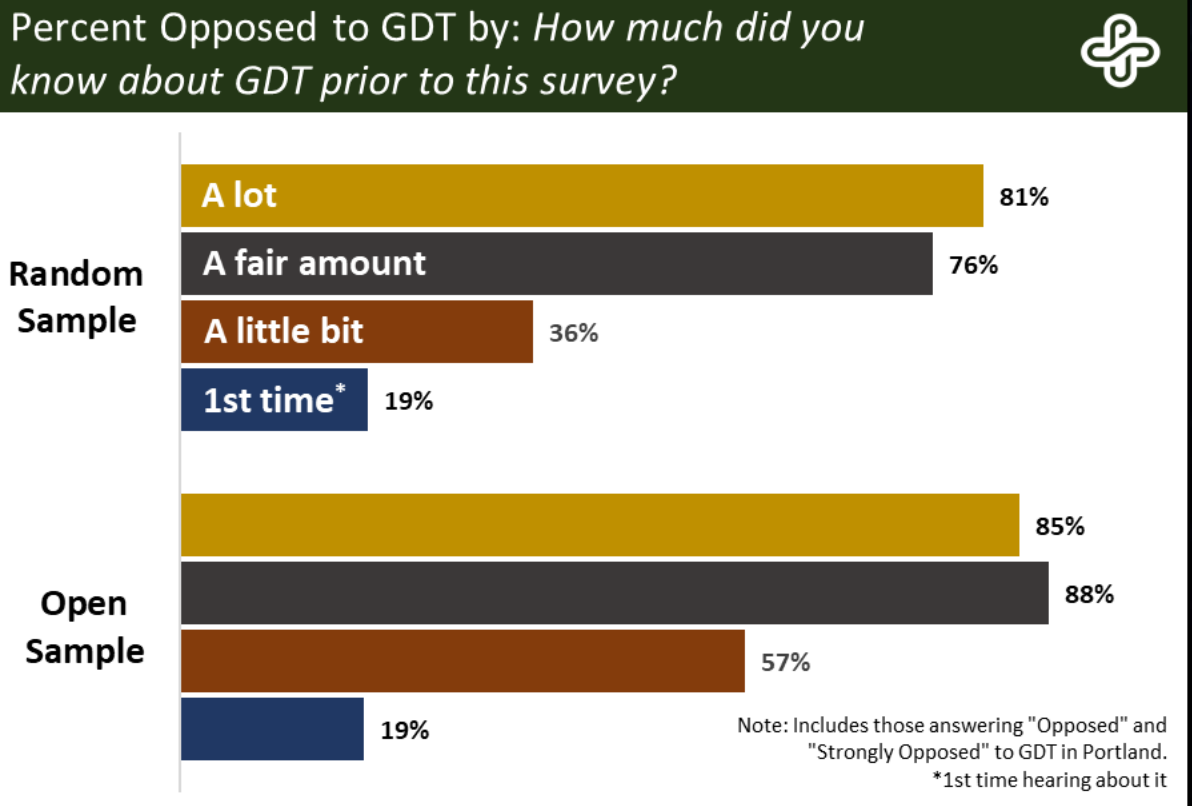
In the random sample, roughly equal proportions of respondents support (44%) or oppose (41%) GDT

In the open sample, the majority (66%) of respondents oppose the use of GDT



Support/Opposition to GDT

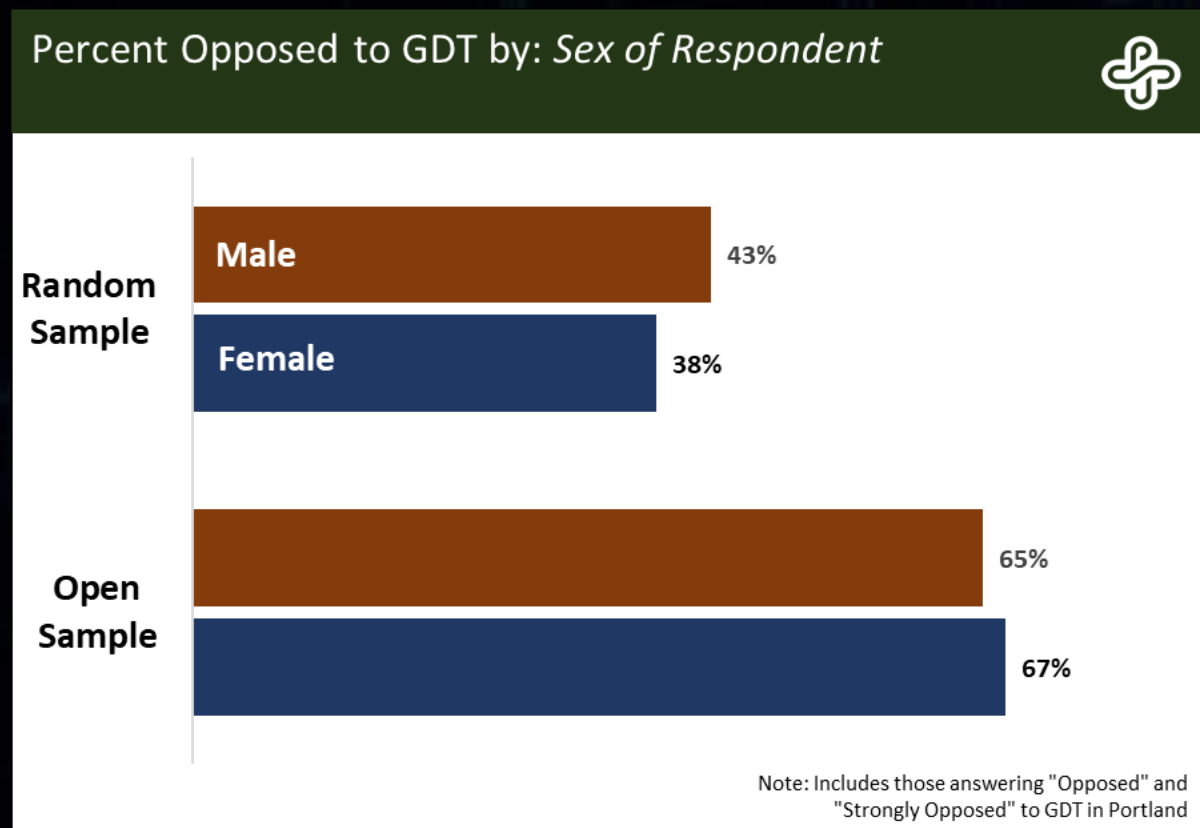
In both samples, opposition to using GDT in Portland was more common among people who knew more about this technology prior to the current survey



Support/Opposition to GDT

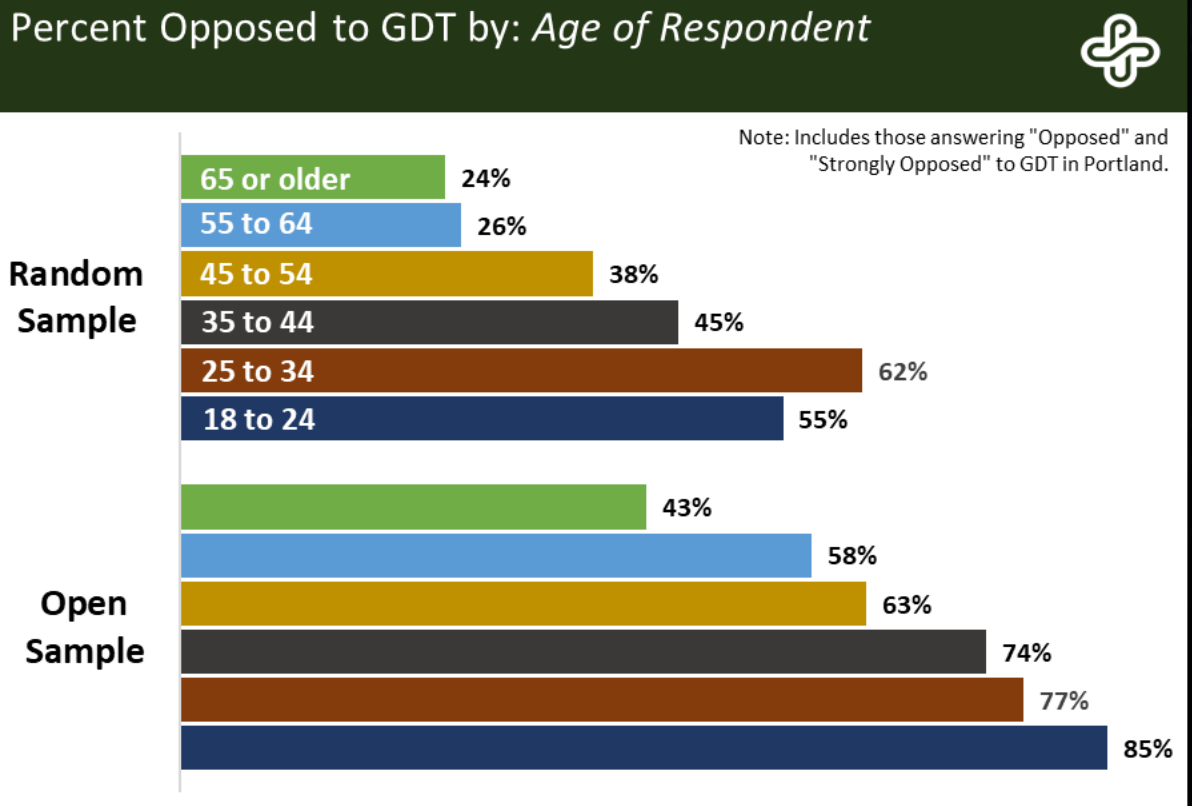
In both samples, opposition to using GDT in Portland was roughly equal among men and women

Note: The sample sizes for people identifying as transgender or non-binary were insufficient to conduct a similar analysis for these groups



Support/Opposition to GDT

In both samples, opposition to using GDT in Portland was more common among younger respondents



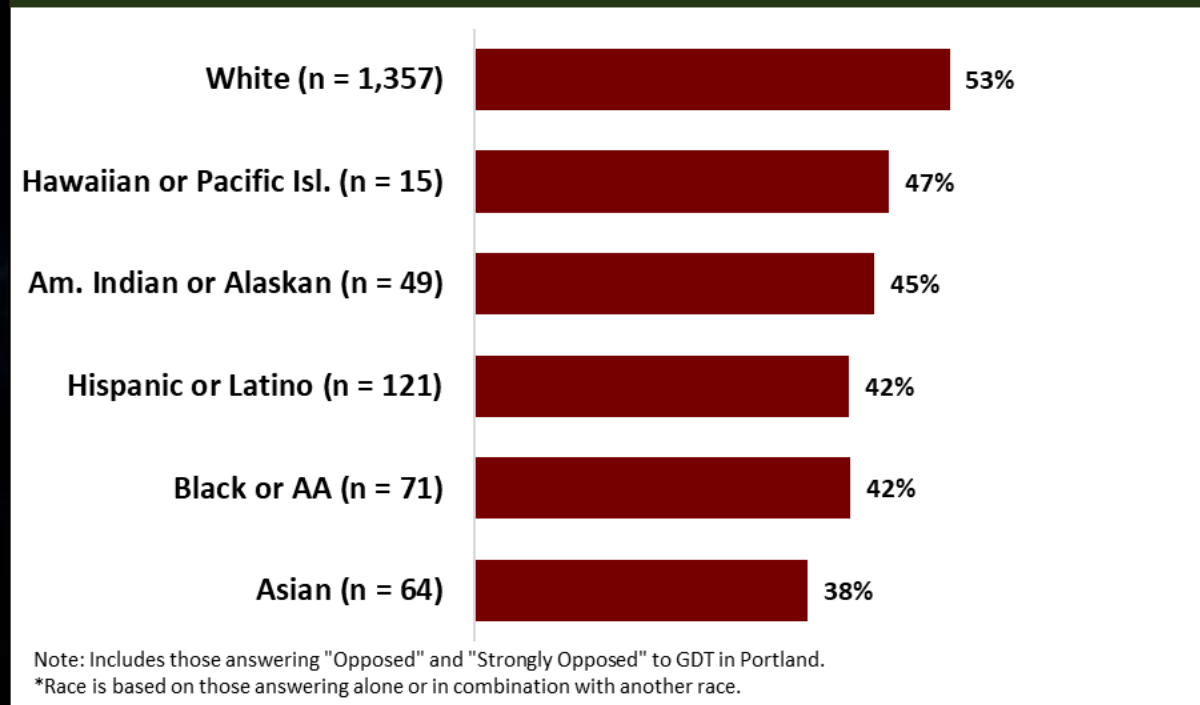
Support/Opposition to GDT

People identifying as White were the most likely to oppose GDT

Opposition to GDT was slightly lower among Hispanic/Latino, Black/African American, and Asian respondents

Note: The open and random samples were combined for this analysis to address the small sample sizes among some groups

Percent Opposed to GDT by: Race/Ethnicity of Respondent (total sample size*)



Concerns About GDT

OPEN SAMPLE - How concerned are you about:	Mean	(0) Not concerned...Very Concerned (3)
Increased police activity in GDT locations (e.g., patrols, arrests)	1.86	
GDT violating people's right to privacy	1.89	
The process for identifying locations where GDT would be used	2.02	
The use of GDT data for other purposes	2.03	
The cost of GDT	2.14	
The PPB's ability to handle increased reports of gunshots	2.21	
The accuracy of GDT in detecting gunshots	2.24	
RANDOM SAMPLE - How concerned are you about:	Mean	(0) Not concerned...Very Concerned (3)
Increased police activity in GDT locations (e.g., patrols, arrests)	1.24	
GDT violating people's right to privacy	1.51	
The process for identifying locations where GDT would be used	1.55	
The use of GDT data for other purposes	1.72	
The cost of GDT	1.85	
The accuracy of GDT in detecting gunshots	1.87	
The PPB's ability to handle increased reports of gunshots	2.20	

The two issues of greatest concern in both samples were: 1) the PPB's ability to handle additional calls for service and 2) the accuracy of GDT in detecting gunshots

People in the open sample expressed significantly greater concern about most aspects of GDT

GDT and Crime in Your Neighborhood

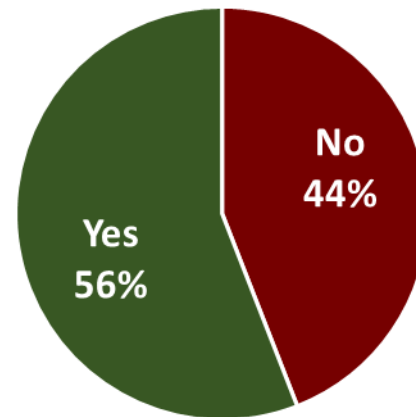
A slight majority (56%) of respondents from the random sample said they would want GDT used in their neighborhood

People in the open sample were significantly less likely to want GDT used where they live

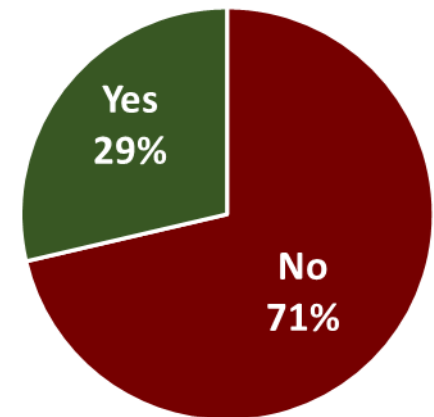
Note: This analysis was restricted to 1,145 people reporting that they live in one of the 23 target neighborhoods

Would you want GDT used in your neighborhood?

Random Sample



Open Sample



GDT and Crime in Your Neighborhood

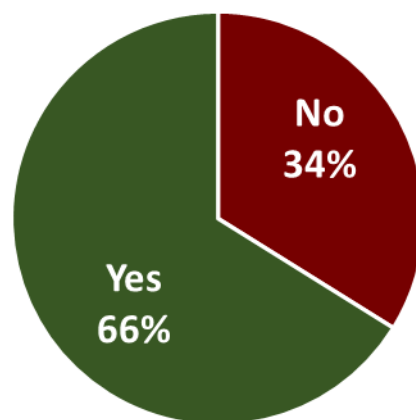
The majority of respondents in both samples say gun violence is currently a problem in their neighborhood

People who perceive that gun violence is a problem are more likely to want GDT used in their neighborhood (54% vs. 35%)

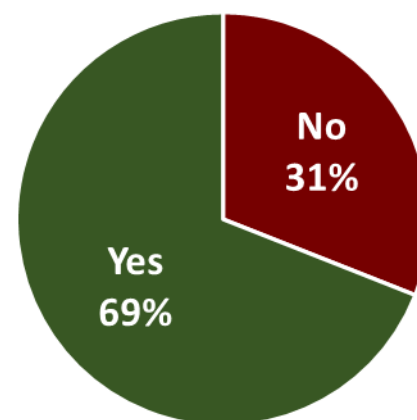
Note: This analysis was restricted to 1,129 people reporting that they live in one of the 23 target neighborhoods

Is gun violence currently a problem in your neighborhood?

Random Sample



Open Sample

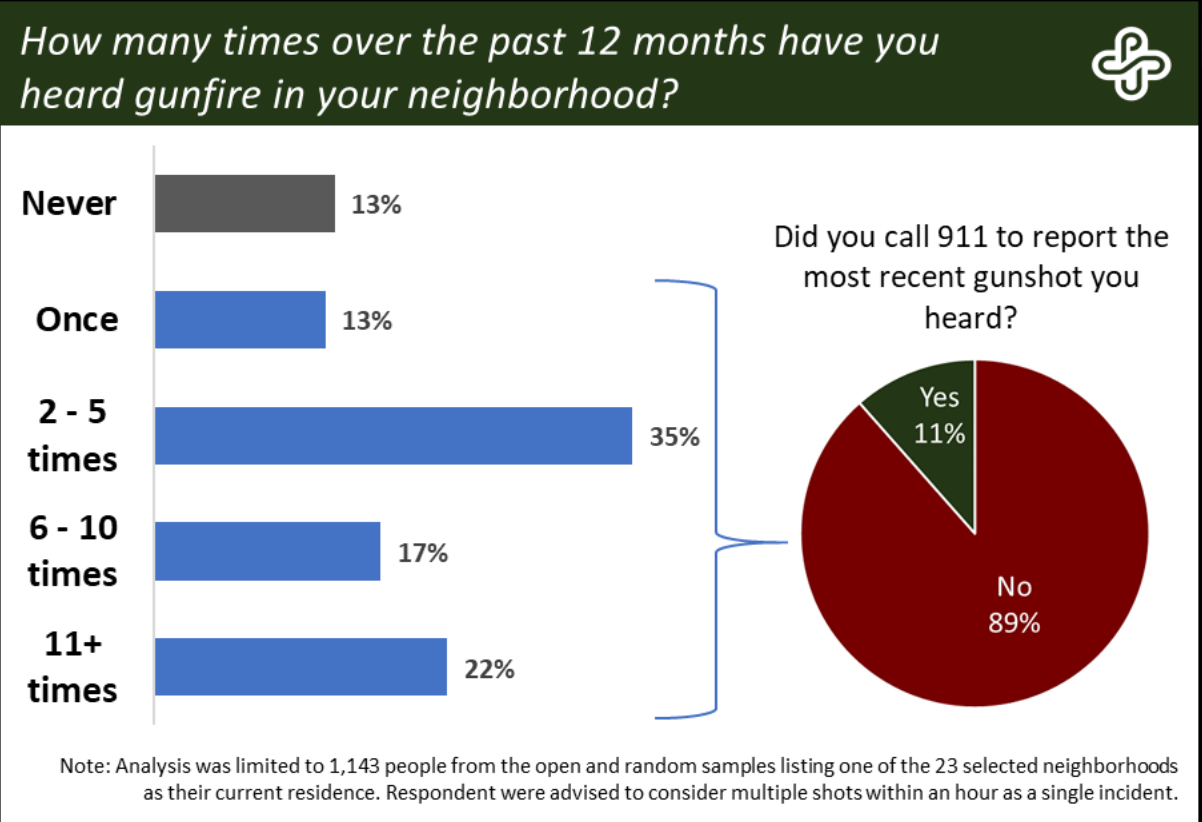


Reporting Gunshots to the Police

The majority (87%) of survey respondents reported hearing one or more gunshots over the past 12 months in their neighborhood

Only 1 out of 10 people (11%) who heard a gunshot said they called 911 to report the most recent incident

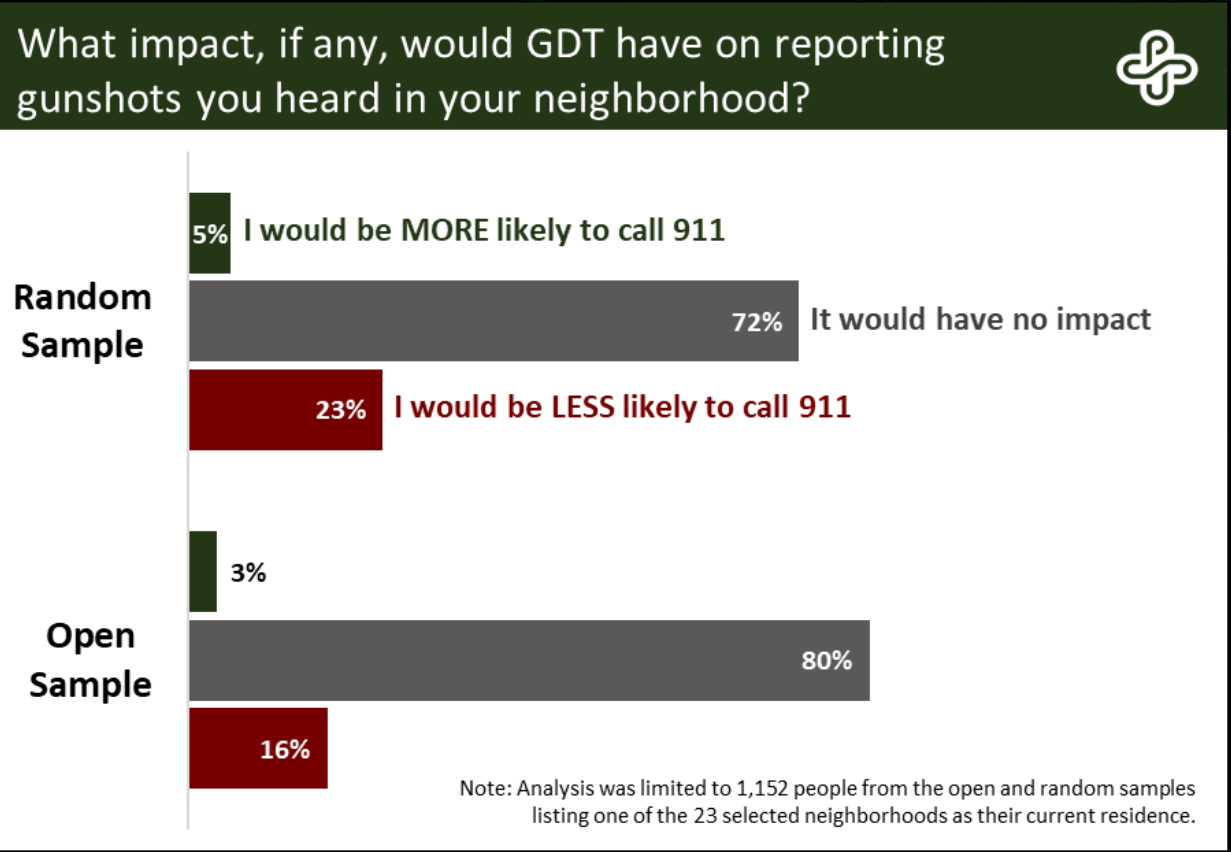
Note: The samples were combined for this analysis because no differences were found in hearing gunshots or calling 911 to report them



Reporting Gunshots to the Police

The majority of respondents in both samples said that the use of GDT in their neighborhood would not impact their reporting of gunshots

Roughly one in five respondents said they would be less likely to call 911 if GDT was being used



Trust in the Police & Support for GDT

OPEN SAMPLE - Please indicate your level of agreement	Mean	(0) Strongly disagree....Strongly agree (4)
The PPB can be trusted to make decisions for my community	1.11	
The PPB are trustworthy	1.20	
I have confidence in the PPB	1.08	
RANDOM SAMPLE - Please indicate your level of agreement	Mean	(0) Strongly disagree....Strongly agree (4)
The PPB can be trusted to make decisions for my community	1.71	
The PPB are trustworthy	1.83	
I have confidence in the PPB	1.69	

Note: (0) Strongly disagree, (1) Disagree, (2) Neutral, (3) Agree, (4) Strongly agree.

Trust in the PPB was low in both samples, but people in the open sample expressed significantly less trust in the agency

People who had less trust in the PPB were significantly more likely to oppose the use of GDT

- Correlations between 1) oppose GDT and 2) the mean score of the 3 trust items above were $-.66$ and $-.51$ respectively for the open and random samples