SACRAMENTO POLICE OFFICER SURVEY 2019-2020

How officers view their work and the community

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Trust in the community

Trust between the police and the community they serve is an important ingredient in effective law enforcement.

Sacramento officers were asked, *"How much trust do you have in the residents in the area where you serve?"* Approximately 29% said hardly any or not much trust. More than half said they have some trust. In contrast, 17% said they have quite a bit of trust and no officer said they have complete trust in the community.

How much trust do you have in the residents in the area where you serve?

	Weighted Frequency	Percent
Hardly any trust	81	12%
Not much trust	115	17%
Some trust	357	54%
Quite a bit of trust	112	17%
Complete trust	0	0%
Total	665	100%
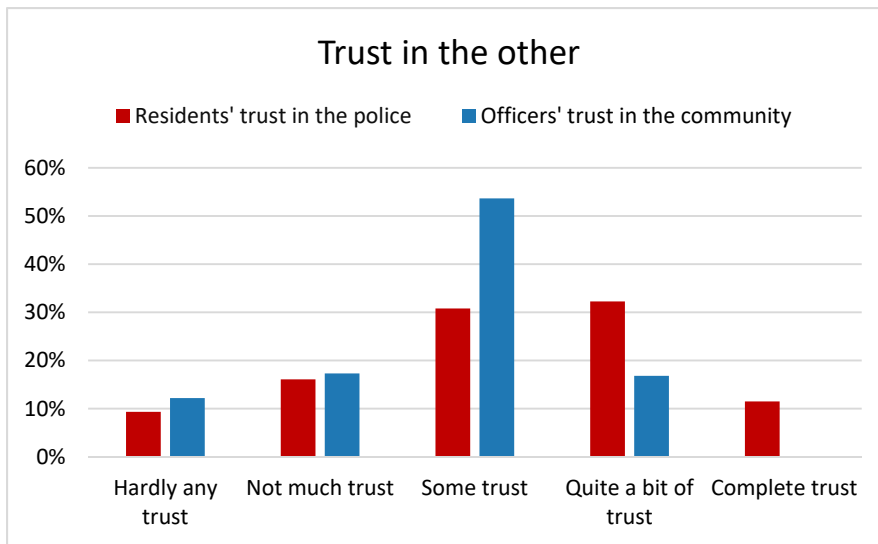
Trust in the other

There is somewhat of a gap in reciprocal trust between the police and the community. Parallel questions on how much trust they had in the other were asked of both the police and community residents. A larger proportion of officers were in the lower trust categories compared to Sacramento residents. About 12% of residents say they have complete trust in the police. As indicated above, no officer said they have complete trust in the community.

(Trust – cont.)

When the top two and bottom two trust categories are combined, we find trust is lowest in District 2, where nearly three-quarters of officers are in the lower two categories and this is consistent with the pattern of lower trust reported by officers jointly assigned to Districts 1 and 2 (42%) compared to officers in District 1 (10%).

Nearly two thirds (62%) of officers in District 5 are in the lower trust categories. Slightly less than half (48%) of officers jointly assigned to Districts 4 and 5 are also in the lower trust categories.

How much trust do you have in the residents in the area where you serve?

		Hardly Any, Not Much	Some, Quite a Bit	Total
Assignment	1	10%		100%
	1&2	42%	58%	100%
	2	73%	27%	100%
	3	22%	78%	100%
	3&6	33%	67%	100%
	4	14%	86%	100%
	4&5	48%	52%	100%
	5	62%	38%	100%
	6	19%	81%	100%
	CW	23%	77%	100%
Total		29%	71%	100%

Job satisfaction

Nearly 80% of officers indicate they are very or somewhat satisfied with their jobs. About 16% said they are not too satisfied and 5% said they are not satisfied at all with their work.

Job satisfaction is lowest in District 2. The other districts approximate the department average.

All in all, how satisfied would you say you are with your job?

	Weighted Frequency	Percent
Not at all satisfied	34	5%
Not too satisfied	106	16%
Somewhat satisfied	307	46%
Very satisfied	221	33%
Total	668	100%

All in all, how satisfied would you say you are with your job?

|		Not, Not too	Some, Very	Total
Assignment	1	17%	83%	100%
	1&2	8%	92%	100%
	2	46%	54%	100%
	3	22%	78%	100%
	3&6	17%	83%	100%
	4	25%	75%	100%
	4&5	19%	81%	100%
	5	13%	88%	100%
	6	19%	81%	100%
	CW	20%	80%	100%
Total		21%	79%	100%

Equal treatment of residents

An overwhelming majority of officers are confident that they treat people of all races equally. Only 2% say they are not confident of equal treatment and an additional 10% are somewhat confident. Nearly 90% say they are very confident.

These results contrast with those obtained when residents were asked the same question. Nearly 40% of Sacramento residents say they are not confident that races are treated equally while only 19% of residents say they are very confident of equal treatment by the police.

How confident are you that Sacramento police officers treat people of all races equally?

	Officers	Residents
Not confident	2%	39%
Somewhat confident	10%	42%
Very confident	88%	19%
Total	100%	100%

Officers treat all races equally

■ Residents ■ Officers
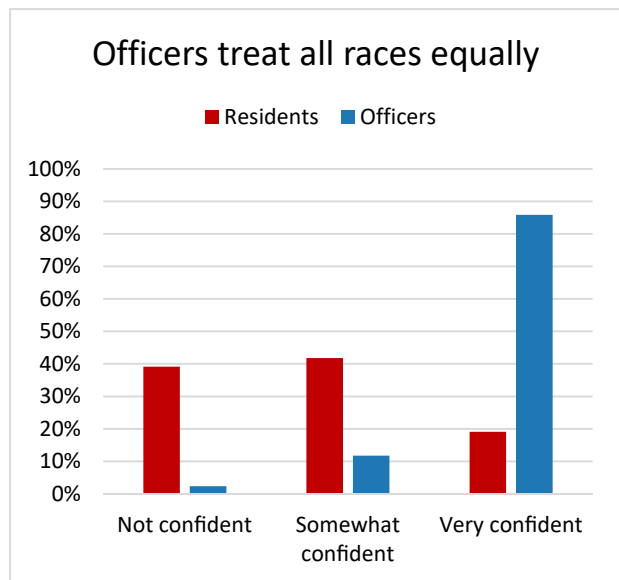
Equal treatment within the department

Officers were asked: "When it comes to decisions about assignments and promotions, which comes closest to describing how things work in the department?"

A majority of officer say minorities are treated better within the department than Whites with regard to assignments and promotion. About 43% say majority and minority officers are treated the same while 5% say White officers are treated better.

When asked a similar question about gender disparities for assignments and promotions, about 61% said men and women are treated about the same. Approximately 29% said women are treated better and about 10% said men are treated better.

On the basis of race/ethnicity

	Weighted Frequency	Percent
Whites and minorities are treated about the same	266	43%
Minorities are treated better than Whites	315	51%
Whites are treated better than minorities	32	5%
Total	613	100%

On the basis of gender

	Weighted Frequency	Percent
Men and women are treated about the same	389	61%
Women are treated better than men	185	29%
Men are treated better than women	62	10%
Total	636	100%

Rating relations between various race/ethnic groups and the police

Officers were asked to evaluate relations between the department and various race/ethnic groups in Sacramento.

Officers say relations are best with Whites and Asians and considerably worse with Hispanics and African American communities.

About 74% of officers say relations with Whites in the community are good or excellent. In contrast, approximately 24% of officers say relations between the police and African Americans are good or excellent.

How would you rate relations between the police officers in your department and the following groups in the community you serve?

	(Weighted Percent) Relations with…			
	Whites	**Blacks**	**Hispanics**	**Asians**
Poor	2%	35%	8%	3%
Fair	25%	40%	45%	30%
Good	64%	21%	41%	57%
Excellent	10%	3%	4%	9%
Too few in this community to say	0%	0%	1%	1%
Total	100%	100%	100%	100%

About 45% say relations with Hispanics are good or excellent while two-thirds say relations with the Asian-American community are good or excellent.

Officer safety concerns

Slightly more than 85% of officers say they have not discharged their firearm while on duty.

When asked if they fear being confronted with a gun or a knife, similar proportions said they had concerns about both types of weapons. Nearly two-thirds of officers said they fear often or nearly always of being confronted with a firearm while 56% said they have similar level of concern about knives.

The geographic areas of greatest concern appear to involve District 2. Concern for safety is also slightly higher than the department average in Districts 5 and 6. These levels of officer safety concerns for Districts 2 and 5 correlate with the reported lower trust in residents shown earlier.

Other than on a gun range or while training, have you ever discharged your service firearm while on duty?

	Weighted Frequency	Percent
No, I have not done this	561	86%
Yes, I have discharged my firearm while on duty	95	14%
Total	655	100%

How often, if ever, do you have serious concerns about your physical safety and being confronted while on duty by a subject with a firearm or a knife?

	Firearm	Knife
Never	1%	2%
Hardly ever	8%	11%
Sometimes	26%	31%
Often	42%	35%
Nearly always	23%	21%
Total	100%	100%

How often, if ever, do you have serious concerns about your physical safety and being confronted by a subject with a firearm while on duty?

		Never, Hardly, Sometimes	Often, Always	Total
Assignment	1	61%	39%	100%
	1&2	33%	67%	100%
	2	17%	83%	100%
	3	51%	49%	100%
	3&6	46%	54%	100%
	4	39%	61%	100%
	4&5	48%	52%	100%
	5	27%	73%	100%
	6	23%	77%	100%
	CW	31%	69%	100%
Total		35%	65%	100%

Police - community interactions

Officers were asked a variety of questions to evaluate police-community relations. An overwhelming majority of officers say that high-profile fatal incidents involving police and African Americans have made their job harder. In contrast, only 4% said these events have not made a difference in their work.

More than 85% of officers say they were verbally abused by a member of the community while on duty in the past month. Less than 15% report they have not been verbally abused by a community member.

When asked if officers had spoken at a citizens' group, school or appeared at a community event in the past month a clear majority expressed they had attended these types of public events.

About half of officers surveyed stated they have physically struggled or fought with a suspect who was resisting arrest in the past month.

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In general, high-profile fatal incidents involving police and African Americans made your job...

	Weighted Frequency	Percent
Easier	0	0%
Have not made a difference	28	4%
Harder	630	96%
Total	658	100%

Have you been verbally abused by a member of the community while you were on duty in the past month

	Weighted Frequency	Percent
No	93	14%
Yes	566	86%
Total	659	100%

Have you spoken to a citizens' group or a school or appeared at a community event in the past month

	Weighted Frequency	Percent
No	260	40%
Yes	398	60%
Total	658	100%

Have you physically struggled or fought with a suspect who was resisting in the past month

	Weighted Frequency	Percent
No	331	51%
Yes	315	49%
Total	647	100%

Evaluating use of force policies

Officers were asked to evaluate the department's use of force policies. Slightly more than two-thirds (69%) say the rules governing use of force are about right. Slightly less than one-third (31%) said they are too restrictive.

Officers responded in somewhat similar proportions to a follow-up question on the usefulness of department force guidelines.

About one quarter of officers said they are not too useful or not useful at all. About 76% said they are somewhat or very useful.

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In general, would you say the rules governing the use of force in your department are...

	Weighted Frequency	Percent
Not restrictive enough	2	<1%
About right	448	69%
Too restrictive	204	31%
Total	653	100%

How useful are your department's use of force guidelines when officers are confronted with actual situations where force may be needed?

	Weighted Frequency	Percent
Not useful at all	31	5%
Not too useful	129	20%
Somewhat useful	345	53%
Very useful	150	23%
Total	654	100%

Dealing with the mentally ill

Officers believe overwhelmingly they are adequately trained to deal with the mentally ill suspects they encounter. About 88% of officers agreed that their training is adequate while 12% disagreed.

When asked to evaluate how well they deal with mentally ill suspects, about 87% rated the department's treatment as well or very well. Only 2% rated the treatment as poor or very poor.

When residents were asked the same questions, they responded in markedly different proportions compared to the officers.

Approximately 64% of residents said the police are not adequately trained compare to 12% among the officers. Only 10% of residents said the police deal very well with the mentally ill compared to a majority (56%) of the officers who give the same top rating.

The Sacramento police are adequately trained to deal with the mentally ill people they encounter when responding.

	Weighted Frequency	Percent
No	76	12%
Yes	579	88%
Total	655	100%

Please rate how well the Sacramento police deal with mentally ill people suspected of a crime

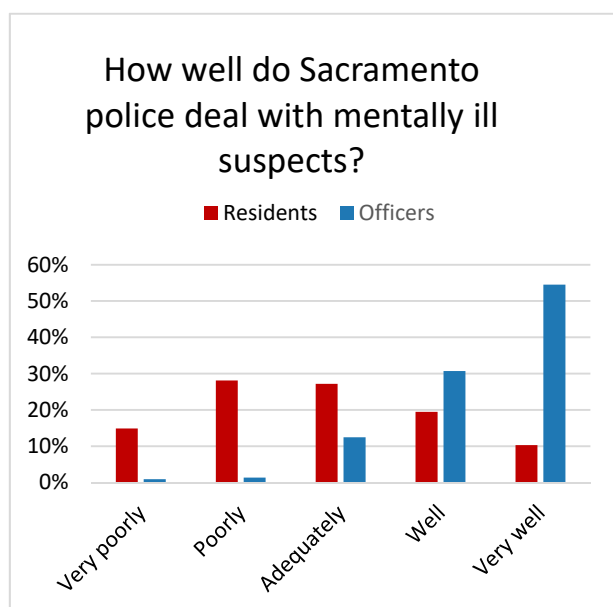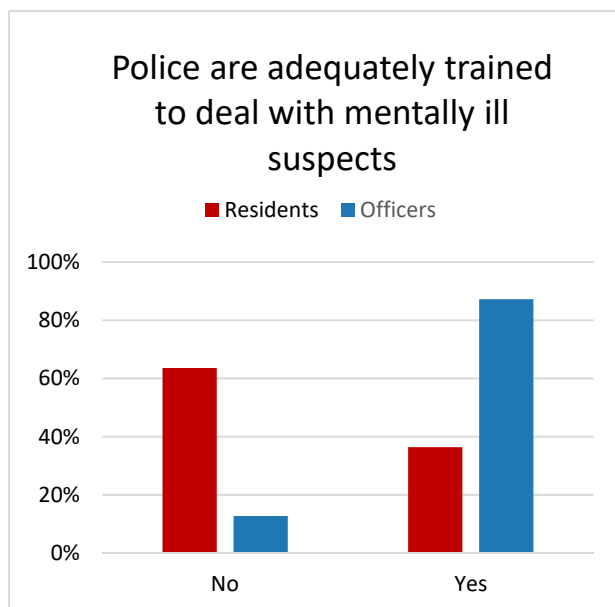|	Weighted Frequency	Percent
Very Poorly	5	1%
Poorly	9	1%
Adequately	76	11%
Well	207	31%
Very well	372	56%
Total	669	100%

This question was a key driver of other attitudes toward the police in our study of community residents. Residents who are critical of the department's handling of the mentally ill are also critical of other aspects of the department. The charts below show the contrast between the officers' rating and the ratings given by Sacramento residents on these two survey questions. Officers are more positive than the residents.

Police are adequately trained to deal with mentally ill suspects

How well do Sacramento police deal with mentally ill suspects?

Burnout/callousness

Research has shown that increasing callousness is a primary feature of burnout. This question is taken from a widely used scale to assess the level of burnout an individual is experiencing. This particular question taps the depersonalization dimension of the problem. Nearly one in six (17%) officers are at the top end of the scale on this question.

Depersonalization is an important issue because research into policing has shown it is a major factor in excessive use of force and a number of other negative outcomes for officers.

Consider this statement: I've become more callous toward people since I took this job. How often does this statement describe the way you feel about working as a police officer?

	Weighted Frequency	Percent
Never	87	14%
A few times a year	126	20%
Once a month or less	48	7%
A few times a month	125	20%
Once a week	61	10%
A few times a week	85	13%
Every day	108	17%
Total	640	100%

In subsequent analyses, we use this question to compare those at the top of the scale to the officers with lower levels of depersonalization, and how they respond to other survey questions.

Evaluating the 'Ferguson Effect'

Officers were asked, "As you may know, demonstrations have been held in many parts of the country in recent years to protest the deaths of African Americans who died during encounters with the police, including in Sacramento. Would you say any of this is happening in the area you serve as a result of these incidents?"

One version of the Ferguson Effect is based on the idea that officers are less likely to proactively patrol neighborhoods following high-profile police use-of-force incidents involving African Americans. This explanation suggests crime will increase under these conditions because there is less of a police presence.

Officers have been more reluctant to use force when it is appropriate

	Weighted Frequency	Percent
No, has not happened	27	4%
Yes, has happened	624	96%
Total	651	100%

Officers have become less willing to stop and question people who seem suspicious

	Weighted Frequency	Percent
No, has not happened	27	4%
Yes, has happened	630	96%
Total	657	100%

There is almost universal agreement within the department that officers are more reluctant to use force now as a result of these incidents and the subsequent protests. About 96% of officers agree there is now more reluctance to use force.

As with the use of force question, almost all of the officers (96%) say there is also less willingness to stop and question suspicious people.

An overwhelming majority officers say these fatal incidents and subsequent protests have made interactions between the police and African American residents more tense.

Interactions between police and Black residents have become more tense

	Weighted Frequency	Percent
No, has not happened	62	10%
Yes, has happened	584	90%
Total	646	100%

(Ferguson Effect – cont.)

A second version of the Ferguson Effect suggests that following high-profile officer-involved shootings, residents are less likely to call the police out of concern they will be mistreated. Crime, therefore, increases as residents are less likely to cooperate with law enforcement. A majority of officers (54%) say people in their service area remain about the same in their willingness to provide information to the police about suspicions people or events. About 41% believe people are now less likely to provide information and about 5% say people are now more likely to cooperate with police.

People in your area are more likely, about the same, or less likely to provide information to Sacramento police about suspicious persons or events

	Weighted Frequency	Percent
Less likely	260	41%
About the same	339	54%
More likely	31	5%
Total	630	100%

When responses are broken down by district, it appears the belief there is now a greater unwillingness to cooperate with police is found primarily among officers who work in District 2. In contrast, officers who work in Districts 3 and 4 see less negative change in resident attitudes compared to the department average on this question.

Most all officers indicate the department has taken steps to improve relations between the police and Sacramento's African American residents.

People in your area are more likely, about the same, or less likely to provide information to Sacramento police about suspicious persons or events

		Less likely	About the same	More likely	Total
Assignment	1	37%	50%	13%	100%
	1&2	54%	46%		100%
	2	51%	44%	4%	100%
	3	23%	69%	8%	100%
	3&6	43%	57%		100%
	4	16%	75%	9%	100%
	4&5	45%	55%		100%
	5	48%	48%	4%	100%
	6	48%	52%		100%
	CW	46%	49%	5%	100%
Total		41%	54%	5%	100%

The department has taken steps to improve relations between police and Black residents

	Weighted Frequency	Percent
No, has not happened	20	3%
Yes, has happened	617	97%
Total	637	100%

Neighborhood issues: Homelessness is the top neighborhood problem

Officers were asked, "How much of a problem are the following in your area?"

The leading problem identified by officers is homeless people in the areas in which they work. This problem is closely followed by dealing with mentally ill suspects.

Drugs, litter, gangs and gun violence were also identified as a big problem

Officers			
Issue	**A big problem**	**Somewhat of a problem**	**Not a problem**
Homeless people in your area	94%	6%	0%
Mentally ill subjects	87%	13%	0%
Selling or using drugs	79%	20%	1%
Litter/trash	71%	24%	5%
Gang violence	62%	29%	9%
Gun violence	59%	34%	7%
Vacant housing or storefronts	53%	37%	10%
Drinking in public	49%	40%	10%
Teenagers causing a disturbance	42%	41%	17%
Graffiti	30%	50%	20%

by about two-thirds of the officers. Vacant buildings and public drinking were rated as a big problem by about half of the officers and teen disturbances and graffiti were the lowest rated problems.

Residents and police officers generally agree in the ordering of neighborhood problems. Homeless people and drug sales/usage are at the top of the list for both groups. Fewer residents see any of these issues as a big problem in their area compared to the proportion of officers who do see them as a big problem.

Residents			
Issue	**A big problem**	**Somewhat of a problem**	**Not a problem**
Homeless people in your area	41%	31%	28%
Selling or using drugs	30%	31%	38%
Litter/trash	28%	38%	34%
Gun violence	24%	26%	50%
Teenagers causing a disturbance	21%	34%	45%
Drinking in public	19%	30%	50%
Vacant housing or storefronts	17%	31%	52%
Graffiti	14%	34%	53%

Officer perceptions of neighborhood problems and burnout

The level of burnout seems to be related to perceptions of neighborhood problems. Officers with the highest burnout level rated some neighborhood issues as a 'big problem' to a greater extent than officers who indicate lower levels of burnout.

For example, the greatest differences based on burnout level are found for drugs, litter and vacant buildings. Approximately 93% of the high-burnout officers reported selling or using drugs as a big problem in their area compared with 77% of officers with lower burnout scores.

	Officer Burnout Level	
	Lower	Highest
	Officer rating	
Issue	Issue is a big problem	Issue is a big problem
Homeless people in your area	94%	97%
Mentally ill subjects	86%	93%
Selling or using drugs	77%	93%
Litter/trash	69%	82%
Vacant housing or storefronts	50%	71%
Gang violence	60%	68%
Drinking in public	45%	63%
Gun violence	58%	60%
Teenagers causing a disturbance	41%	42%
Graffiti	29%	33%

Likewise, 71% of the high-burnout officers see vacant housing and storefronts as a big problem in their area compared with 50% of the officers with lower burnout scores. There is general agreement between the two groups of officers on the seriousness of homelessness, mentally ill suspects, gang violence, gun violence, teen disturbances and graffiti.

It should be noted that we cannot say whether extended exposure to more serious neighborhood problems leads to burnout or if the extent of burnout leads officers to find neighborhood problems more distressing. With these data, we cannot say which is the cause and which is the effect. What is clear is these two factors are related.

Evaluating policy changes

There have been a number of policy changes at the state level and within the department in response to officer-involved fatal incidents in Sacramento and elsewhere in California and the nation.

A majority (57%) of officers believe these policy changes have decreased officer safety. About one out of four officers say the new policies have greatly decreased officer safety. About 14% of officers say the new policies have either somewhat or greatly increased officer safety.

There have been a number of state and local policy changes within the past three years, such as SB1421 (mandatory release of certain police personnel records), AB392 (which focuses on de-escalation, crisis intervention training and further defines the deadly force standard), SPD Use of Force Policy, SPD Body Worn Camera Policy, SPD Foot Pursuit Policy, Racial Identity Profiling Act (RIPA) requirements, and a number of other new and revised policies. Overall, how have these policy changes over the past three years affected officer safety?

	Weighted Frequency	Percent
Greatly decreased officer safety	158	25%
Somewhat decreased officer safety	207	32%
Made no significant impact	185	29%
Somewhat increased officer safety	64	10%
Greatly increased officer safety	27	4%
Total	641	100%

Evaluating community efficacy

Previous research indicates that collective efficacy plays a key role in reducing crime. Collective efficacy refers to the ability of residents to work together in cooperation with law enforcement to address neighborhood crime. An overwhelming majority of officers disagree or strongly disagree that residents would intervene if there was a fight or someone was beaten or threatened. Only 10% of officers believe that residents would intervene in these type of neighborhood problems.

Please indicate whether you agree or disagree with this statement: A resident in your area would intervene if there was a fight in front of a home and someone was being beaten or threatened. Do you...

	Weighted Frequency	Percent
Strongly disagree	226	34%
Disagree	260	40%
Can't decide	104	16%
Agree	56	9%
Strong Agree	9	1%
Total	656	100%

Evaluating gun violence in Sacramento

Officers were asked to give their views on the problem of gun violence. Research suggests that an officer's exposure to gun violence must be considered in relation to police use of force. A significant percent of officers say that gun violence is a problem in the area they serve. Nearly 80% of officers perceive gun violence to be a moderately big problem or a very big problem. In contrast, about 20% of officers view gun violence as a small problem or not a problem at all.

Is gun violence a problem in the area you serve?

	Weighted Frequency	Percent
Not a problem at all	22	4%
A small problem	108	16%
A moderately big problem	241	36%
A very big problem	290	44%
Total	661	100%

Factors that contribute to gun violence

Here is a list of things some people say contribute to gun violence. How much, if at all, do you think each of the following contributes to gun violence in the area you patrol or work in today?

	Weighted percent					
	Guns illegally obtained in CA	**Guns obtained illegally via interstate trafficking**	**Gang-related violence**	**Drug dealing**	**Family/ domestic violence**	**Social media**
A great deal	54%	33%	76%	72%	32%	42%
A fair amount	31%	33%	17%	25%	38%	37%
Not too much	11%	26%	6%	2%	27%	20%
Not at all	4%	8%	1%	1%	2%	1%
Total	100%	100%	100%	100%	100%	100%

Officers were asked their views on the factors that contribute to gun violence. Previous research highlights the role of illegally obtained firearms as a factor that contributes to gun violence. According to the research, firearms are obtained illegally in two primary ways: 1) intrastate sales and 2) interstate trafficking from adjacent states, most notably Nevada and Arizona. An overwhelming majority of officers stated that guns illegally obtained in California contributed a great deal or a fair amount to gun violence. Less than 15% of officers stated that guns illegally obtained were not at all or not too much of a factor in promoting gun violence.

Similarly, officers were asked their perceptions regarding the role of guns obtained illegally via interstate trafficking. Like the previous question, nearly 66% of officers stated that guns obtained illegally via interstate trafficking contributed to firearm violence a great deal or a fair amount. Just over a third of officers believe that guns obtained illegally via interstate trafficking were not too much or not at all an ingredient of gun violence.

Gang violence was viewed by officers as the most significant element related to gun violence. An overwhelming 93% of officers stated that gang related violence contributed a great deal or a fair amount to firearm related violence. Less than 10% of officers stated that gang violence was not too much or not at all a component of gun violence.

Nearly 97% of officers viewed drug dealing as contributing a great deal or a fair amount to gun violence.

Officers were asked their views regarding the relationship between family/domestic violence and firearm violence. Nearly 80% of the officers state domestic/family violence has a great deal or a fair amount of influence on firearm violence. About 29% say that domestic violence is not too much or not at all a factor in gun violence.

Social media is increasingly believed to spark gun violence. More than three-quarters of officers say that a fair amount or great deal of gun violence is spurred by social media. In contrast, less

than a quarter of officers perceive social media as not too much or not at all being related to firearm related violence.

Demographics

This table shows the breakdown of various demographic variables in this survey.' Frequency' is the unweighted number of valid survey responses and the next column is the associated unweighted percentage.

'Weighted percent' shows the percentages for valid responses used in the analysis after weights are applied and non-substantive responses are omitted. The weights were developed using the department's census counts in each demographic category.

The purpose of the weights is to adjust the survey sample for non-response so it better reflects the department's composition.

Participation for certain groups, such as White officers, was lower than the proportion in the department. Consequently, the officers in this group have a weight greater than 1.0 to increase their representation in the analysis. Self-reporting was higher than the department's administrative records indicate for Hispanic officers and may reflect an anonymity effect on responses obtained by a questionnaire. As a result, Hispanic officers were over-represented in the data collection process and they have a weight of less than 1.0 to make that proportion also reflect the department's composition.

	Frequency	Unweighted Percent	Weighted Percent	SPD Census Percent
Gender				
Female	65	17.1	16.1	16.1
Male	316	82.9	83.9	83.9
Total	381	100.0	100.0	100.0
Race/Ethnicity				
White	233	64.7	70.8	71.1
Black	20	5.6	5.0	5.1
AI/AN	5	1.4	0.8	0.7
Asian	21	5.8	10.5	9.4
Other	6	1.7	1.0	2.4
Hispanic	75	20.8	11.8	11.3
Total	360	100.0	100.0	100.0
Bachelor's Degree				
No	68	16.1	27.7	27.7
Yes	354	83.9	72.3	72.3
Total	422	100.0	100.0	100.0
Supervisor				
No	294	74.8	81.9	81.8
Yes	99	25.2	18.1	18.2
Total	393	100.0	100.0	100.0
Geographic Assignment				
1	24	5.5	7.2	7.2
1&2	20	4.6	4.0	4.0
2	36	8.3	7.2	7.2
3	45	10.4	11.8	11.8
3&6	22	5.1	3.6	3.6
4	25	5.8	6.6	6.6
4&5	23	5.3	4.6	4.6
5	29	6.7	7.2	7.2
6	31	7.2	9.4	9.4
Citywide	178	41.1	38.6	38.6
Total	433	100.0	100.0	100.0

'SPD Census' shows the department's proportions as provided from administrative records.

Technical Appendix - Survey weighting methodology

Introduction

The following report details the survey methodology steps used to calibrate the Sacramento Police Officer Survey 2019-2020.

Scope: City of Sacramento police officers, California USA

Purpose: To measure how Sacramento police officers feel about various aspects of their work including gun violence and the current police-community relationship.

Mode: A self-completed computer based questionnaire, ~15 minutes in length. Participation was voluntary, the information collected did not contain identification questions for confidentiality and the officers were invited to provide comments at the end of the questionnaire.

Frame: Administrative data on 671 Sacramento police officers.

Coverage: The survey was offered to all officers with the following classifications: police chief, deputy chief of police, police captain, police lieutenant, police sergeant and police officer.

Demographics: The following demographic information was requested: district assignment, supervisor status, gender, race and ethnicity, and education level.

Strata of Interest: District assignment is an important business model post-stratification output. Following historical precedent, race/ethnicity, gender, educational level and supervisor status based summaries are likely to display heterogeneity in their estimates and response behavior.

Survey Response

The survey responses were obtained during the period between 11/26/2019 - 01/06/2020. For each question, consistent with the voluntary nature of the survey and to elicit unbiased answers, the respondent was also allowed to answer "no response" (code 99).

In summary,

1. 500/671 (74.5%) questionnaires were opened by the department population.

2. 433/671 (64.5%) questionnaires contained partially or fully completed information.

3. 351/671 (52.3%) questionnaires had fully completed demographic information.

As will be described below, weighted survey estimates were derived for 433 respondents to the survey, representing a 64.5% response rate.

A total of 67 survey responses of the 500 opened questionnaires (67=500-433 records) were deemed unusable as they were either (i) not finished status, meaning almost all questions were unanswered and/or "no response" to district assignment (52 records), or (ii) contained "no response" to all the demographic questions accompanied with a majority of "no response" answers for the rest of the questionnaire (15 records).

The 433 partial or full response questionnaires

The set of 433 partial or full response records contained only a small (or zero) proportion of "no response" (code 99). For non-demographic questions, the "no response" answer was very low (0-3%). For the demographic questions, the proportion of "no response" answers had wider range (2.5-17%).

In the main report for each output table (of proportions), the "no response" answers (0-3%) are omitted and the proportions of valid responses sum to 100%. This is a standard approach to dealing with question non-response and provides the clearest interpretation of the informative valid survey responses.

For *District Assignment* in the set of 433 partial or full response records, there was zero "no response" but there were a minor number of instances of conflict with the known frame counts partly due to respondent confusion with the series of district assignment related survey questions. In resolution, Sacramento Police Department (SPD) staff proposed (i) two records be edited to 'Citywide' based on the respondents' written comments and (ii) records with conflicting two-district assignments be edited to Citywide assignment, as well.

For the demographic questions there was

1. 40/433 (9.24%) "no response" to *Supervisor* status (ie. supervisor = police sergeant or higher)

2. 52/433 (12.0%) "no response" to *Gender* (ie. male, female)

3. 73/433 (16.9%) "no response" to *Race/Ethnicity* (ie. Asian American, Black [African American], Hispanic, American Indian [or Alaska Native], Native Hawaiian [or Other Pacific Islander] and White [Euro American])

4. 11/433 (2.54%) "no response" to *Education level* (ie. obtained a bachelor's degree or not)

For *Supervisor* status it is speculated the "no response" answer rate may be driven by respondents' interest in reducing identification risk.

For *Gender* it is speculated the "no response" answer rate may be driven by (i) respondents' interest in reducing identification risk, (ii) an individuals' disagreement with focus on gender issues or (iii) increasing public self-reporting of non-binary gender descriptions. It should be noted that comparing the 433 partially or fully responding questionnaires to the known administrative frame count, the self-reporting of *Gender=female* was slightly higher (65/108 (60.2%) to 316/563 (56.1%)).

For *Race/Ethnicity* it is speculated the "no response" answer may be driven by (i) an individuals' disagreement with focus on race/ethnicity issues or (ii) confusion about answering the Race and Hispanic ethnicity questions. It is observed that comparing the 433 partially or fully responding questionnaires to the known frame counts there is high response rates for Hispanic (75/76 (98.7%)) and African American (20/34 (58.8%)) groups and lower response rates for Asian American (21/71 (29.6%)) and Euro American (233/478 (48.7%)).

In principle, the lower response rates for Asian American and Euro American is not dissimilar to lower response in the SPD community survey but the high Hispanic response rate seems unusually high. In resolution, Sacramento Police Department (SPD) staff advised that while the personnel records (ie. frame counts) formally identify race, the personnel records may not accurately separate out ethnicity. The ethnicity question in The Sacramento Police Officer Survey follows the standard U.S. Census Bureau approach of counting any self-reporting of minor Hispanic ancestry as categorizing the respondent as having Hispanic ethnicity.

For *Educational Level* it is speculated the "no response" answer may be driven by an (i) respondents' interest in reducing identification risk or (ii) an individuals' disagreement with focus on educational level issues.

The low, but substantial rate of "no response" answers to supervisor status, gender, race/ethnicity, education level questions and the differential rates of response by the subgroups of these demographic categories, highlights the importance performing non-response adjustments in building the respondent survey weights. Such non-response adjustments to survey weights are regularly applied to U.S. surveys including the recent SPD community survey. In this case, the administrative frame counts provide the benchmark data for the weighting process so that the survey sample will reflect the department as much as possible.

Calibration of survey responses to district assignment, supervisor, gender, educational level and race/ethnicity benchmarks

The SPD is primarily interested in analyzing the survey results at (i) department level and (ii) between district assignment levels. The district assignment level comprises 10 strata (Districts {1,2,3,4,5,6,1&2,3&6,4&5,CW}) allocating staff to (i) individual Sacramento City Police District duty {1,2,3,4,5,6}, to (ii) paired police district {1&2,3&6,4&5} duties and (iii) Citywide duties {CW}.

Given the initial survey weight (=1), non-response adjustment was conducted using iterative raking (successively) to 5 marginal benchmarks at

1. District assignment

2. Gender

3. Supervisor status

4. Education level

5. Race/Ethnicity

The benchmarks were obtained directly from the SPD administrative frame counts.

The raking procedure for weighting was conducted using an R code implementation of calibration weighting (https://github.com/emunozh/GREGWT) by Dr. M. Esteban Munoz H. [emunozh@gmail.com] of a generalized regression weighing (GREGWT)) approach by Philip Bell, Australian Bureau of Statistics

In iterative raking, successive rounds of GREGWT calibration separately to district assignment, gender, supervisor status, education level and race/ethnicity were conducted until convergence of the weights was achieved. In practice, four rounds of calibration gender, supervisor, education level and race/ethnicity was conducted with 5 rounds for district assignment (including the first and last raking calibration).

Due to the presence of (2.5-17%) item level "no response" for calibration to gender, supervisor, education level and race/ethnicity benchmarks, respectively, a separate calibration category of non-response was added to the benchmark data which was populated and adjusted each raking pass.

Essentially, for benchmark data with two categories (gender, supervisor, education level) the raking weighting step used the (male/female, supervisor/officer, bachelor's degree/no bachelor's degree) benchmark ratio to adjust the benchmark for weighted persons responding as (male/female, supervisor/officer, bachelor's degree/no bachelor's degree) and the weighted question non-response ratio then determined the (gender, supervisor, education level) non-response population estimate.

- For gender the unweighted survey responses for male/female were 56.1%/60.2% respectively of the known number of male/female officers. This comparison indicates a differential non-response of 56.1-60.2 = -4.1% (ie. fewer male police officers were responding). After final weighting, the weighted survey responses for male/female were 88.5%/88.7% and a difference of -0.2%. Thus the raking with 5 benchmarks has removed most of the difference in non-response, leaving ~11.3% as the component of random non-response (consistent with value 52/433=12% of respondents who didn't answer this demographic question).

- For supervisor the unweighted survey responses for supervisor/officer were 81.1%/53.6% respectively of the known number of supervisor/officer counts. This comparison indicates a differential non-response of 81.1 - 53.6 = 27.5% (ie. supervisors had much higher response to the survey). After final weighting, the weighted survey responses for supervisor/officer were 91.3%/91.6% and a difference of -0.3%. Thus the raking with 5 benchmarks has removed most of the difference in non-response, leaving ~8.4% as the component of random non-response (consistent with value 40/433=9.2% of respondents who didn't answer this demographic question).

- For education level the unweighted survey responses for bachelor's degree/no degree were 73%/36.6% respectively of the known number of bachelor's degree/no degree counts. This comparison indicates a differential non-response of 73 - 36.6 = 36.3% (ie. officers self-reporting a bachelor's degree had much higher response to the survey). After final weighting, the weighted survey responses for bachelor's degree/no degree were 97.6%/97.5% and a difference of 0.1%. Thus the raking with 5 benchmarks has removed most of the difference in non-response, leaving ~2.5% as the component of random non-

response (consistent with value 11/433=2.54% of respondents who didn't answer this demographic question).

For calibration to race/ethnicity benchmarks, there were six ({A,B,H,I,O,W} = {Asian American, [Black] African American, Hispanic, American Indian (or Alaska Native), Native Hawaiian (or Other Pacific Islander), [White] Euro American}) benchmarks responding categories and so a seventh calibration category of non-response was added to the benchmark data which was populated and adjusted each raking pass. For example, with race/ethnicity the unweighted survey responses for {A,B,H,I,O,W} were {29.6%, 58.8%, 98.7%, 100%, 85.7%, 48.7%} respectively of the known number of {A,B,H,I,O,W} officers. This comparison indicates differential non-response due to self-reported race/ethnicity (ie. fewer Asian American and Euro American officers were responding). After final weighting, the weighted survey responses for {A,B,H,I,O,W} were {84.5%, 84.5%, 88.8%, 90%, 84.7%, 84.5%}. Thus the raking with five benchmarks has removed most of the difference in non-response, leaving ~15.5% as the component of random non-response (consistent with value 73/433=16.7% of respondents who didn't answer this demographic question).

As mentioned earlier, the Hispanic SPD administrative frame count is not expected to be consistent with the survey question. So, the change from 98.7% unweighted survey response for self-reported Hispanic race/ethnicity to an 88.8% weighted survey response rate is found to be acceptable (and arises by bounding the possible survey weights by 0.9-11 during calibration). Likewise, the weighted survey response rate for American Indian (or Alaska Native) comprising only five officers is reduced to 90% rather than unweighted 100% which is acceptable. These downward adjustments are also ameliorated by the provision of confidence intervals estimates.

Jack Knife replicate estimation of effects of non-response adjustment

One common method to estimate the uncertainty in complex surveys is jack knife replicate estimation, where a unit or group of units are omitted (without replacement) and the remainder of the sample is reweighted to the benchmarks. The variability of the estimate due to the sample design and the influence of particular units (or groups of units) is then captured in the variance of the replicate estimates and it is observed that different estimate have differing margins of error (MOE). A total of 30 group jack knife replicate estimation was also conducted to produce individual standard errors to estimates using the administrative benchmarks.

For this survey population, given it is a finite population comprising the whole SPD administrative frame, the jackknife replicate benchmarks are exactly the same as the full sample benchmarks. As such, the jackknife variance estimates implicitly contain a finite population correction adjustment which reduces the uncertainty in the confidence interval estimates compared to the simple binomial variance formula estimate for proportions.

Note that margin of errors for proportions are lower than for counts since there is some cancellation of systematic errors between the numerator and denominator of a proportion estimate.

The variance formula for the 30 group jack knife estimation is

$$MOE_{weightedestimate} = 1.96 * \sqrt{(\frac{(30-1)}{(30)})[\frac{\Sigma(jk_i - \overline{jk})^2}{(30-1)}]}$$

where jk_i are the 30 group jack knife estimates and $\overline{jk}$ is the mean of the group estimates. The factor $\frac{(30-1)}{(30)}$ adjusts for the fact that jack knife replicate subsamples slightly overestimate the variance of the full sample. Note the jack knife variance formula works for both counts or proportions.

The code *raking_10area_gender_supervisor_degree_raceeth_partrespalso_subroutine_repwt_fn.R* places the main survey weight and 30 replicate jack knife weights on the output survey file. In quality assurance, the replicate estimates were found to provide useful confidence interval estimates for many output tables. In particular, indicating that differences > 2% between table cell (weighted) estimates of proportion were generally statistically significant. To examine the statistical significance of smaller differences, explicit jack knife MOE calculations would be advised.

Calibration code routines
The weighting code setting up the survey file and the benchmark file is contained in the file *crosstabs_benchmarks.R,* which reads the survey file, removes 67 records (plus 2 dummy records), assigns sample unit variables for benchmark classes and aggregates the frame data into benchmark counts. Please run this file only a few steps at a time to properly understand its behavior and numerous intermediate outputs.

The repeated iterative raking subroutine is hard coded as *raking_10area_gender_supervisor_degree_raceeth_partrespalso_subroutine_repwt_fn.R* (with sequential calls to GREGWT to calibrate one benchmark at a time with each round) to allow for weighting convergence. This second program also performs the raking process repeatedly for the jack knife replicate subsamples and finally the separate strata weighting results are concatenated are saved to file as well as attached to the survey data file. This file is set up to be run in one click if all the required libraries are installed.