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Officer Perceptions of Fleet and Take-Home Police Cruisers: Evidence from MA

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Abstract

The purpose of this research is to determine police officers perceived benefits of take-home police cruisers. The primary question to be answered by this research is: do officers see take-home cruisers as a benefit to the department and what are those benefits? Departments typically make large decisions like switching to take home cruisers based on department budgets, what makes the most sense for their individual department, and how it would affect their officers. It is hypothesized that the police officers would perceive the use of take-home cruisers to be more effective compared to a fleet of cruisers. Results show that a majority of officers see take-home cruisers to be beneficial to not only themselves but to their departments. This research was conducted with a small portion of police officers currently working in Massachusetts, leaving behind the perceptions of other officers in the state who are retired or were not reached during the study. Future research should use a larger sample and consider including officers from the entire state of MA, other states, and/or running the study for a longer period of time.

Keywords: Police Cruiser, Police officer perception, Crime Deterrent, Patrol, Department benefits

Introduction

Policing has changed dramatically since it first started. Before cars, police traveled on foot or horseback and were mostly used for delivering summons, warrants and watching prisoners. Police then moved on to use bicycles and motorcycles. Motorcycles were widely used until cars were introduced. Police officers had to adopt the use of cars because criminals were driving them and cops needed to be able to keep up. With the introduction of cars, laws had to be put in place in order to keep people safe on and off the road. These laws included who could drive, requiring individuals to obtain a license and rules of the road like stop lights and speed limits. In order to uphold these laws police departments had to have their own vehicles. A police cruiser is a car used by police officers while on duty, these cars are owned by departments. In Akron, Ohio, 1899, the first police car was introduced to the streets, although cars were not common for police departments for several decades. Police cruisers were soon equipped with a radio, which meant communication between the cruisers and the department was possible. This led to the transition of having several officers working to one officer covering more of an area by themselves while using a cruiser from the department fleet.

Police departments vary between whether they provide their officers with fleet vehicles, take-home cruisers or a combination of both. Fleet cruisers are when police departments have a limited amount of cruisers that officers use while on shift. Officers rotate between vehicles and

the vehicles stay at the respective departments. Take-home cruisers are those which a police department lends a car to an officer that they use on shift that they take home with them as their personal cruiser. By analyzing officer perceptions on take home cruisers and department fleets we can recognize how important the use of police cruisers is to a department. Though research assesses how the public perceives some types of police cruisers no research has examined how police officers view using the different police vehicles. Police cruisers are an officers office and with the amount of time they spend working it can feel like a second home, which is why it is important to know how officers perceive the different vehicles. The current study seeks to fill this gap.

Literature Review

Police cruisers are used to help officers to respond to calls and be easily recognizable by the general public. In Hawaii and several European countries, officers drive around with their blue lights on simply so that their presence is known. In order to provide the largest amount of exposure to the community, officer's attempt to be visible to the public at all times when possible. Marked police cruisers or cars with lights help increase the police presence. The Newark Foot Patrol Experiment examined the impact officer's on foot patrol had on crime in the area (Police Foundation, 1981). The results showed that although the increased presence did not have a significant impact on overall crime, arrests or victimization the community's perception

of safety increased. This research shows that the visibility and presence of the officers' made the citizens in the area feel safer. It is possible that having more police cruisers on the street, or in residential areas, could have this same effect. Having a police cruiser in a neighborhood provides the visibility that the officer is there without directly having to see him or her in order to provide a sense of safety.

Police cruisers allow officers to respond to calls faster than if they were on foot like they were years ago. Pate and colleagues (1976) assessed at the effects of police response time and how it affects the community. It found that the community's satisfaction with the police was not largely affected by their response time to a situation, rather it was determined by the contact they had with the police. The expectations of time response that citizens have compared to what is actually possible is an important variable in this study. What is deemed an appropriate response time is interpreted differently by each individual in respect to their personal . However, the faster the officer arrives and the more contact the individual has with the police the satisfaction with the police was higher. This means that with more police cruisers on the road, there can be faster response rates and there will be more contact with citizens because they are more identifiable at all times, on and off duty. All of these factors could increase citizen satisfaction with police.

Police Cruisers

Research suggests that there are both advantages and disadvantages to giving police take-home cruisers. Fowler Jr. (2011) explained the different advantages of take-home cruisers. These vehicles are not used by every officer, so they have more down time, which extends their overall lifespan. Police officers take more pride in taking care of their own vehicle, which could lead to less maintenance costs. Reduced maintenance costs could save the departments money adding another advantage of take-home cruisers.

Department fleets have a limited number of cars, there may not be a 1:1 or even a 2:1 ratio of officers to cruisers. Still, evidence suggests that take home vehicles are more cost effective than department fleets. Montgomery (2008) explained that marked vehicles in their fleet are replaced every two to three years. The fleet vehicles usually had between 85K and 125K miles at the end of their use (Montgomery, 2008). It is projected that take-home vehicles would be used $\frac{1}{3}$ less than fleet vehicles, which would then have a life expectancy of about 7 years. This information is vital for police departments to take into consideration. The initial cost to get all of the vehicles may be substantial at first but suggests that overall cruiser maintenance costs decrease in the long run.

The literature lacks a thorough discussion of the advantages of a fleet. One issue police officers face with fleets is that not all cruisers were set up the same. The officers would have to

learn how to set up equipment and operate each one appropriately. Police cruisers were constantly in use, or “hot seated,” meaning that officers would finish their tour and pass off the keys to the next officer on duty to set up and continue to use the same vehicle. The issue with a vehicle being “hot seated” is that the vehicle was never shut off and was constantly running, forcing it to over work. When a vehicle is constantly running it does not give it a chance to cool down, which can cause maintenance issues.

Cruisers Impact on Emergency Situations

In the case of an emergency, there may not be enough cruisers in a department fleet to respond immediately or get enough officers to the scene. The Merrimack Valley Gas Explosions is an example of an emergency hitting an area and needing additional resources. On Thursday September 13th, 2018 at 1600, Columbia Gas over pressurized 8,750 meters of their low pressure gas lines throughout Andover, North Andover, and Lawrence communities. It was difficult for police officers to get into the area if they were off duty and did not have a take-home cruiser, for there were not enough cruisers for each officer, leaving them at the station waiting for someone to get them. In total 660 personnel from over 140 different law enforcement agencies showed up to the command center in Lawrence.

Perceptions of Different Types of Police Cruisers

There is research on society's view of police officers and their cruisers, this research fills the gap left behind on officers' perceptions of cruisers. Marked and unmarked cars are factors that can also have an impact on society's perception of police cruisers. Simpson (2018) conducted a study on members of the public's perceptions of police officers based on if the cruiser they drove was marked or unmarked. Officers were perceived more favorably in the eyes of the public when in marked cruisers. The color of the marked cruiser also made a difference; black and white were favored more than white and blue. The small factor of the color of cruisers makes an impact on how officers are perceived by the public because they are making their presence known. It is important to recognize these things so that police officers can have a better relationship with the greater public. Marked take-home cruisers would bring a larger presence of police cruisers to neighborhoods, making it a normal occurrence to see police cruisers and not just while they are being used for work. It is still unclear how another important stakeholder perceives these various police vehicles: the police officers themselves.

The Current Study

Prior research shows some advantages of take-home cruisers and fleets helping start the discussion for this research. However prior research does not look at how officers perceive the cruisers when cruisers are their offices. The purpose of this research is to determine police

officers' perceived benefits of take-home police cruisers. Departments typically make large decisions like switching to take home cruisers based on departmental budgets. It is hypothesized that the police officers would perceive the use of take-home cruisers to be more effective compared to a fleet of cruisers. The reasoning for this hypothesis is that police officers would take pride in having their own take-home cruisers. The geographical areas in which these departments are in or the size of their jurisdiction also has an influence on what is needed within a department. There is currently no research on how police officers in Massachusetts perceive fleet and take-home cruisers. The goal is to fill that gap with this research, informing officers interested in this topic that could potentially not only benefit them but their departments.

Data and Methods

Sampling

The participants were both municipal and state Massachusetts police officers that the primary investigator was able to contact. Officers were employed in Essex, Middlesex, and Suffolk counties. The primary investigator sent out an email to Massachusetts police officers and asked for their consent to participate in the study. All of the participants were above the age of 20 years old, with varied police-rank. Individuals must be active police officers working in Massachusetts in order to be a part of the study.

The sample constitutes a non-probability sampling design with a convenience strategy. The only inclusion criteria for the study was that the police officers were easily accessible to the primary investigator and willing to complete the survey. Of the 56 officers solicited to participate

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in the survey, 45 responded, yielding an 80% response rate. Participating officers represent 18 different police departments across the state of MA. The participants being from the same state is a strength because it concentrates the perspectives of Massachusetts police officers. However since only a few officers from each department were contacted from such a large range of departments, the sample does not accurately represent each department, or the state as a whole.

Table 1. Sample Descriptive Statistics

Characteristic	Percentage of Sample
Officer Gender	
Male	87%
Female	13%
Officer Age	
20-29	27%
30-39	22%
40-49	20%
50-59	24%
60+	7%
Officer Rank	
Patrolman	42%
Detective	7%
Sergeant	13%
Lieutenant	2%
Chief	7%
Trooper	9%
No answer	20%
Percentage of officers living in the same city/town they work	60%

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Table 2. Departments Employing Research Participants

Department	# of officers
Ashburnham Police Department	1
Attleboro Police Department	1
Bolton Police Department	2
Boston Police Department	2
Boxborough Police Department	2
Concord Police Department	1
Dracut Police Department	1
Georgetown Police Department	1
Haverhill Police Department	1
Ipswich Police Department	1
Lawrence Police Department	2
Massachusetts Institute of Technology Police Department	1
Massachusetts State Police	6
Merrimack College Police Department	1
Methuen Police Department	3
North Andover Police Department	1
Reading Police Department	1
Rowley Police Department	1
Salem Police Department	1
Tufts Police Department	1
Waltham Police Department	1
Watertown Police Department	3
Woburn Police Department	8
Total participants	45

Of the 45 respondents who completed the survey, 87% were male and 13% were female.

The 45 participants come from 18 different police departments in Massachusetts (See Table 2).

The participants with various rankings were working in Essex, Middlesex, and Suffolk counties.

The demographic of the survey can be broken down into six different ranks including patrolman (42%), detective (7%), sergeant (13%), lieutenant (2%), chief (7%), and state trooper (9%).

Data Collection

Once the participants consented to participate in the study, they completed an online electronic survey that they completed on their phone or computer at work, home or anywhere else that was convenient to them. This meant that the participants did not all take the survey in the same environment. Some might have had distractions going on around them, while others may have started the survey and had to pause and finish it later. The survey consisted of 20 questions that took approximately 20 minutes to complete. The survey used mostly but not entirely closed ended questions in order to get quantitative data of the officers' perception of the fleet and take home cruisers. The participants were allowed to skip any question that they did not want to answer or stop taking the survey at any time. The survey ran a total of 5 weeks from the initial contact with participants to when the survey was closed.

Measures

This study primarily measured officers' perceptions of police cruisers. The survey was geared toward finding out officer perceptions on cruisers and how they affect their work, home lives, and attitude. Using a likert scale, the participants were asked to indicate how strongly they agree or disagree with several statements regarding take-home police cruisers. Examples include,

take-home cruisers would increase officer morale, and deter crime. The participants were also given the space to elaborate on their responses. The participants were asked to describe the reasoning for their answers on certain measures, ie. explaining how a take-home cruiser would affect their neighborhood.

The survey asks the participants to indicate if they live in the same city/town as their department. The reasoning for this is to see if participants perceive take home cruisers differently depending if they do or do not live in the same city/town. Then asking if their department offers take home cruisers and if yes do they have a take home cruiser. It is important to have this information to then compare the findings if those who have the opportunity to receive a take home car or already have one feel differently than those who do not.

Analysis Plan

Data was collected through an online survey on Google Forms that was emailed to individual police officers in Massachusetts. Google forms collected the individual responses of each participant and the question, calculating the percentages of each answer and organized them in charts. Each chart represented a separate question and was analyzed on it's own and descriptive statistics of responses were calculated. In some cases, responses were disaggregated by officer gender or age to determine if groups of officers responded differently. The results are reported below.

Results

This research has revealed that 58% of the officers reported their departments offer take-home cruisers. Half of the officers whose departments offer take-home cruisers have been given their own personal cruiser. This shows that departments in MA can have a combination of fleet of cruisers and take-home cruisers. Not all departments equip every officer with a take home vehicle, even if some officers have them.

Depending on if an officer has a take-home cruiser or not affects the time it takes them to get the vehicle they are using ready. Officers can set up their personal take-home cruisers on their own time so that they are prepared for work. This survey showed that 81% of all officers indicated that it takes them less than ten minutes to load/unload their vehicle on an average day. The research also showed that 93% of the officers reported waiting less than ten minutes to use a vehicle while on duty on an average day. One officer responded, "If I had my own cruiser I would carry much more safety/medical equipment essential to police work that I feel all officers should carry" thus enforcing the idea that officers feel take-home cruisers would be more beneficial in regards to officer safety.

This study looks at the perceived benefits that come along with take-home cruisers. These benefits can include officer morale, attitudes towards work, and crime deterrence. It may also increase employee recruiting and retention, officers may want to work for certain departments if

they are offered a take-home cruiser for work. One officer even commented that , “Everyone I know that has a take home cruiser says it is the best thing that they have ever had from their work.”

The Perceived Effects of Take-Home Cruisers on Police Officers

Eighty percent of the respondents believed take-home cruisers would be a successful tool in developing a better attitude towards their work. One officer commented on why his attitude towards work would be better with a take-home cruiser saying, “[I]feel as if I belong to the department, not just a number.” The officers who did not agree that a take-home cruiser would be beneficial to their attitude expressed concern about the cost of providing each officer with a take-home cruiser. Similarly, 89% of officers in the study agreed or strongly agreed take-home cruisers would increase officer morale and 80% agreed take-home cruisers would increase employee retention. While 9% of the officers disagreed with both statements on officer morale and employee retention, this left 2% of the officers neutral to take-home cruisers increasing officer morale and 11% of officers neutral on take-home cruisers increasing employee retention. It is important to look at attitude and morale separately because without officers individually having a positive attitude at work, the morale of the department cannot be positive. The research asked if officers agreed that take-home cruisers would reduce vehicle maintenance costs for their department. The results displayed a majority (69%) of officers agreed that take-home cruisers

would reduce maintenance costs. Officers were consistent when reporting if they agreed or disagreed on different elements of take-home cruiser benefits. A large majority (5 out of 6) of the officers who disagreed with three or more of the statements previously mentioned in regards to potential benefits, were above the age of 40. This indicates younger officers tend to look more favorably on the take-home cruisers than the older officers.

The Perceived Effects of Take Home Cruisers on Society

It is also possible that in addition to benefiting police officers and departments, that take home cruisers affect the general public. The results of this study indicate that 89% of officers believed take-home cruisers would affect their neighborhood environment or the residents in which they live. One officer reported that “It would affect the neighborhood favorably, acting as a deterrent to crime and adding security to the neighborhood with its presence.” Another commented that “it may also help bridge that gap that has become very anti- police the past few years.” Five of the officers reported they did not believe take-home cruisers would affect their neighborhood environment. Three of those five officers do not live in the city or town that they work in. These officers explained that their neighbors know that a cop lives there and that their neighborhoods are made up of a majority of other officers. The impact of take home cruisers is assumed to be lesser in these areas.

The research revealed a large majority (78%) of officers agreed that take-home cruisers would prevent crime. When asked how strongly officers agreed or disagreed 80% strongly agreed or agreed that take-home cruisers would also deter crime. This left a total of 13% to respond with neutral, and 7% who disagreed that take-home cruisers would deter crime. Police

officers not only respond to crime but to emergencies and they must get there as soon as possible in order to help. When asked if take-home cruisers would decrease response times to incidents less than half (47%) of the respondents agreed, many of the officers felt neutral on the situation. This may be because they feel it would take just as long to respond to a call because having a take-home cruiser would not change their location at the time of the call.

Discussion

The results indicate that the overall majority of officers in this study perceive take-home cruisers to be beneficial with respect to maintenance costs, crime prevention, and officer morale. Officers were less confident that take home cruisers would improve their response time to criminal incidents or calls for service. Officers with take-home cruisers reported that they make their time at work more efficient, and those without cruisers assumed these vehicles would help with efficiency. The officers explained that cruisers serve as their offices when they are working and become like a second home given the amount of time they spend on patrol. "We spend 8 hours on a typical shift and then can work an 8 hour detail all spent in our cruiser, making it a second home." When cruisers are shared issues can go unnoticed and unresolved if officers are not paying close enough attention or perhaps some officers just hope their coworker takes care of the problem instead. Some officers take better care of the cruisers than others. Responses have shown reports of some officers who leave cruisers dirty and unorganized. "It is clear that when officers are assigned a vehicle, they take better care of it. When officers pick a different car each

shift, the cars get abused, minor issues go unfixed and the vehicle's are typically very dirty.”

Unorganized cruisers can become an issue if things are left behind and important paperwork and evidence ends up getting lost or misplaced.

From this information we can learn that police cruisers are more than just a vehicle to officers. Cruisers are such a large part of a police officer's job and they affect the way officers view their job, some officers have even changed departments in order to receive a take-home cruiser. The study shows that a large majority of these officers believe that take-home cruisers would increase the morale of their departments. Police officers see terrible things all the time thus making it important that their attitudes toward work are positive so they can properly do their job. Based on this research, take home cruisers may provide a way to accomplish these goals.

The findings from this research are important not only for individual officers but to police departments as a whole as well. This research can start a conversation about what will make the workplace better and it may lead to more benefits for officers and departments alike.

Departments may not have thought about the ways in which take-home cruisers could affect their departments and their officers before. Officers can take this information to their departments and analyze what would be best for their individual department and complete their own research as

needed. This study represents only a small portion of Massachusetts police officers but could be the beginning of a larger conversation.

The limitations of the sample in this study were that it left out police officers that do not work in Massachusetts, were not reached in other departments or agency's or have retired. This limitation means that any officer that works in a different state, has retired or was not reached during this study is not represented. The results of this study only represent a small number of police officers in Massachusetts. The size of the sample was small with an even smaller representation of female police officers. This research was also done during the pandemic of Covid-19, making it difficult to get in touch with officers with their increasingly busy schedules during this time. The pandemic also forced the research to be solely online, trying to reach officer's through the phone, social media and email. There was no chance for the investigator to speak with officers in person to explain the study and reach a larger population. As such, the investigator was required to rely on her own police contacts, limiting the opportunity to obtain a more representative sample. The pandemic also took away the face to face portion of officers being able to ask any questions they may have had and for the investigator to explain the importance or answer clarifying questions regarding the survey.

Future research can examine how take-home cruisers can affect a department's budget. Some questions to be answered include: Are take home cruisers a possibility for all departments?

Will take-home cruisers decrease overall costs in the long run? Should all departments switch to take home cruisers? What are the benefits to department fleets? Do officer's in other states perceive take-home cruisers the same way? An improved design based off the limitations of this study would be contacting more departments and having a longer window of opportunity to allow officers to answer the survey and increase responses. The survey could also be distributed in paper to each department as well as online. Having a larger sample that is more diverse with officers from different states, departments, and agencies would be more beneficial and give future investigators more data to analyze.

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Appendix A
Survey Instrument

Please answer the following questions to the best of your knowledge.

1. Please indicate your gender:
 - Male
 - Female
 - Prefer not to respond

2. Please indicate your age:
 - 20-29
 - 30-39
 - 40-49
 - 50-59
 - 60+

3. Please indicate the department that employs you:

4. Do you live in the same city/town that employs you?
 - Yes
 - No

5. Does your department offer take home cruisers?
 - Yes
 - No

6. If you answered yes to your department having take home cruisers, do you have a take home cruiser?

7. Please estimate how much time (hours/minutes) it takes on an average day to load/unload your vehicles:

8. Please estimate how much time (hours/minutes) it takes on an average day to wait for a vehicle to use:

9. Do you think a take home vehicle program can help officers develop a better attitude towards work?

Yes

No

10. Please explain why you do or do not think a take home vehicle program can help officers develop a better attitude towards work.

11. Do you think having a take home cruiser would affect the neighborhood environment or residents where you live?

Yes

No

12. Please explain why you do or do not think having a take home cruiser would affect the neighborhood environment or residents where you live.

The following questions deal with your perceptions of take home cruisers. Please indicate how strongly you agree or disagree with the statements provided.

1) Take home cruisers would reduce vehicle maintenance costs for my department:

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

2) Take home cruisers would decrease response times to incidents:

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

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3) Take home cruisers would increase officer morale:

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

4) Take home cruisers would deter crime:

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

5) Take home cruisers would increase employee recruiting success:

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

6) Take home cruisers would increase employee retention :

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

7) Take home cruisers could prevent crime:

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

8) Take home cruisers would allow me to increase the amount of time I spend on car patrol.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree