



Cops and cameras: Officer perceptions of the use of body-worn cameras in law enforcement



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ABSTRACT

Purpose: There has been a recent surge in the adoption of and media attention to the use of body-worn cameras in law enforcement. Despite this increase in use and media attention, there is little to no research on officer perceptions of body-worn cameras.

Methods: This study relies on baseline data of officer perceptions toward body-worn cameras collected from surveys administered to Orlando Police officers who are participants in a randomized experiment evaluating the impact of body-worn cameras (Taser AXON Flex) in law enforcement.

Results: Results suggest that police officers are, by and large, open to and supportive of the use of body-worn cameras in policing, they would feel comfortable wearing them, and that they perceive a potential for benefits of body-worn cameras in improving citizen behavior, their own behavior, and the behavior of their fellow officers.

Conclusions: Officers are generally supportive of body-worn cameras, and they hold perceptions that these devices can be beneficial in positively affecting relevant outcomes. Study limitations and implications are also discussed.

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Introduction

Policing has been witness to a significant amount of problematic issues (Blackwell & Vaughn, 2003; Kowalski & Lundman, 2007; McElvain & Kposowa, 2004; Phillips & Varano, 2008; Weir, Stewart, & Morris, 2012; Weitzer, 2002; Zhao, Ren, & Lovrich, 2010) as well as innovation and change in recent years (Culver, 2004; Zhao, Lovrich, & Robinson, 2001). For example, regarding the latter, technology is transforming modern policing; it is enhancing crime fighting capabilities, police accountability, and police-community relationships. And, according to the Executive Director of the Police Executive Research Forum (PERF, 2012: iii), the transformation will continue: “we expect to see a new Age of Technology in policing over the next 10 to 20 years, as the technologies that we currently are testing really take hold, and new technologies that we aren’t even aware of yet become available.” Current police technologies include advanced crime analysis, artificial intelligence, GPS to track suspects and police vehicles, license plate readers, and the use of social media to receive or disseminate information, to name a few. Cameras, too, are becoming an important part of policing. These include stationary cameras to provide street surveillance, cameras mounted inside police automobiles (“in-car cameras”) and, most recently cameras mounted on police uniforms (“body-worn cameras”). All forms of cameras are thought to be valuable

for producing documentary evidence, but the in-car cameras and body-worn cameras are purported to have another key advantage: to improve the behavior of both police officer and community member in an encounter. In-car cameras were the first to take hold in the profession, but the greatly expanded record produced by cameras worn on officers (versus automobiles) are leading to their increased popularity as evidenced in the wake of recent events in New York and Ferguson. The judge that found stop and frisk activities were being implemented in an unconstitutional manner by New York Police Department officers, recommended body-worn cameras as one intervention (Floyd *et al. v. City of New York et al.*, 2013). Similarly, the tragic shooting death of Michael Brown, a Ferguson, Missouri teenager, brought the discussion of body-worn cameras to the immediate forefront of policing. Police departments across the United States are being pressured by their communities to adopt body-worn cameras and the Ferguson Police Department implemented body-worn cameras within one month of the shooting.

As body-worn cameras proliferate, there is important research that is needed. Research is also needed, however, on aspects of implementation. If body-worn cameras are as valuable as some claim, it is important that the process of adoption within police departments be as effective and efficient as possible. Relevant to this objective is understanding to what extent officers are open to agency adoption of body-worn cameras and their views of the positive and negative aspects of them. The purpose of this study is to provide some of the first ever evidence of this information through a study of officers involved in a randomized experiment evaluating the impact of body-worn cameras in law enforcement.

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Literature review

Over the past decade, video recording equipment has helped monitor and record police officers' and subjects' behavior. As above, in-car cameras were the first to be adopted by police in the United States. Literature on in-car cameras has pointed toward substantial benefits for police agencies (IACP, 2003, 2004). For instance, results suggest that in-car cameras enhance officer safety, improve agency accountability, simplify incident review, and reduce agency liability (IACP, 2004). Similarly, closed circuit television (CCTV) cameras have produced increased surveillance opportunities for police officers (Menichelli, 2014; Ratcliffe, Taniguchi, & Taylor, 2009; Surette, 2005; Welsh & Farrington, 2011).

Novel in their application, body-worn cameras provide a unique opportunity to examine the full range of police officer/community interactions. Proponents of these devices claim that they can improve the behaviors of both officer and citizen, increase officer safety, reduce use of force and external complaints, and increase internal complaints (and thus officer accountability) (Farrar & Ariel, 2013; MPD, 2013; White, 2014). In the United States, three research studies (none as of yet published as journal articles) have been completed examining the effects of body-worn cameras on police-citizen interactions according to a recent review (White, 2014). From February 2012 to July 2013, a Cambridge University study examined the effects of "wearable" video cameras on patrol officers' compliance rates in Rialto, California. In this particular study, police officers ($N = 54$) were randomly assigned to wear a body-worn camera (or not) based on the officer's work shift. Over a 12-month study period, Rialto Police Department officers exhibited a 59% reduction in the use of force incidents and an 87.5% reduction in citizen complaints when compared to department estimates for all officers prior to implementation of body-worn cameras (Farrar & Ariel, 2013). Additionally, significant treatment effects (body-worn camera shifts vs. control shifts) were achieved for use of force outcomes in which there were nearly 50% less incidents for body-worn camera shifts (Farrar & Ariel, 2013).

Building upon this research, the Mesa (Arizona) Police Department conducted a program evaluation of "on-officer" body-worn cameras from October 2012 to September 2013. In this study, 50 police officers equipped with body-worn cameras were compared to 50 demographically similar officers who did not wear body-worn cameras. The one-year pilot study yielded a 40% decrease in complaints and a 75% decrease in use of force incidents across study officers (Mesa Police Department, 2013).

Starting in April 2013, the Phoenix (Arizona) Police Department (PPD) equipped 56 officers with body-worn cameras and compared them to 50 control officers for one year. The study examined the effects of body-worn cameras on police officer complaints, as well as their impact on citizen-officer interactions (Rosenbaum, Schuck, Costello, Hawkins, & Ring, 2005; White, 2014). According to preliminary results, self-reported data indicated that most officers were comfortable wearing body-worn cameras, yet did not believe they should be adopted for all frontline personnel in the department (White, 2014; Katz & Kurtenbach, 2014). Also, self-reported police officer productivity increased for officers wearing body-worn cameras, while self-reported complaints against officers decreased by 60% during the study period; official records also indicated a 44% decrease in complaints against officers (Katz & Kurtenbach, 2014; White, 2013, 2014).

While our knowledge of the impact of body-worn cameras is increasing, little to nothing is still known about the perceptions of police officers on the subject. It is important to understand this perspective, because officer buy-in can be important for effectuating the desirable outcomes. Officers who have negative views of body-worn cameras may subvert efforts by their agencies to acquire them or undermine effective implementation in the agencies that do adopt them. Conversely, officers who are supportive of body-worn cameras can produce an effective implementation that may even enhance the value of the body-worn cameras. Understanding officers' preconceived notions about the

positive and negative aspects of body-worn cameras can be useful for education campaigns within departments to increase officers' openness to the technology.

Some previous studies have surveyed officers about their perceptions of in-car or body-worn cameras; some solicited attitudes and perceptions *before* the cameras were placed in the field and some obtained the information *after* the officers had some experience with cameras. The International Association of Chiefs of Police (IACP, 2003) surveyed officers about their perceptions of *in-car* cameras *after* they had experience with them. One-third of the officers reported that they felt safer as a result of the in-car cameras. Most of the officers (70%) reported that the in-car cameras had little or no impact on their behavior and higher percentages reported that the in-car cameras had no effect on how they handled incidents (86%) and their decisions to use force (89%).

Comparatively, much of the information reported on police officer perceptions of *body-worn cameras* is anecdotal in nature (White, 2014). Exceptions include the survey results associated with the two Arizona studies described above. Four in five (77%) of the Mesa officers surveyed prior to implementation believed the body-worn cameras would cause them to behave more professionally; only 23% indicated that the department should adopt body-worn cameras for all officers (White, 2014). The Phoenix (Arizona) police officers indicated "ambivalent or negative" attitudes about the potential impact of body-worn cameras prior to wearing body-worn cameras (White, 2013, 2014). Despite this preliminary evidence, information that can be gleaned from these studies is limited.

Body-worn cameras require significant financial commitments from police departments both in up-front costs and in the costs to maintain and update this technology over time. Recognizing these considerable costs coupled with the recent surge in media attention and academic discourse on the utility of body-worn cameras in policing, it is important to gain an understanding of officers' perceptions toward the devices. This information can be used to produce information campaigns that might increase officer openness to the technology and thereby produce more successful implementation and more positive outcomes. This study will contribute to the literature by providing one of the first studies ever to examine officer attitudes toward body-worn cameras by gauging the impressions of officers in an agency before body-worn cameras were placed in the field and *prior to* high profile incidents such as what occurred in Ferguson, Missouri.

Data and methods

The current study examines police officer perceptions of body-worn cameras through data collected from officers within the Orlando, (FL) Police Department (OPD). OPD employs over 700 sworn personnel and over 100 non-sworn personnel. The department has jurisdiction of roughly 110 square miles, and services a population of over 270,000 citizens.

Participants

The data come from a larger research project examining the impact of police officer body-worn cameras, in which patrol officers were randomly assigned to one of two groups: Body-Worn Cameras and No Body-Worn Cameras. The Body-Worn Camera group was equipped with Taser AXON Flex body-worn cameras (<http://www.taser.com/products/on-officer-video/axon-flex-on-officer-video>). Study participation was voluntary, and 95 patrol officers out of the nearly 400 eligible patrol officers agreed to participate in the research project.

Baseline survey

Data analyzed in the current study were collected through baseline surveys distributed to the patrol officers ($n = 95$), who consented to participate in the study, *before* cameras were placed in the field. Baseline

surveys were used to answer the question, “What are police officer attitudes and perceptions toward body-worn camera use within their department?” Surveys were distributed online through the Qualtrics Survey Program and took between 15 and 20 minutes to complete. The survey was initially distributed in March 2014 and data collection was concluded by the end of April 2014. Ninety-one officers responded producing a 96% response rate.

Fifteen items in a broader survey (Appendix 1) were used to measure officers’ general perceptions of body-worn cameras (BWCs) as well as the perceived effects of BWCs on citizen behavior, personal behavior, and the behavior of their fellow officers. Subjects responded to the items using a 5-point Likert-scale measuring study participants’ level of agreement on items associated with body-worn camera implementation, with 5 indicating “strongly agree” and 1 indicating “strongly disagree.” Two items (pertaining to the impact of body-worn cameras on officers’ willingness to respond to calls for service) were reverse coded so that, consistent with the other items, a 5 reflected a positive perception of body-worn cameras.

Study officer characteristics

Descriptive statistics were conducted to examine demographic characteristics of study officers. Table 1 indicates that 88.5% of the patrol officers surveyed were male, and 85.4% of the officers were White, 10.4% were Black, and 4.2% reported being of Other race. On average, the officers were 35.64 years of age ($SD = 7.99$ years), with the youngest officer being 24 and the older officer being 59 years of age. The officers had an average of 6.66 years ($SD = 5.10$ years) of experience with a range of 0.25 years to 19 years.

Analytic strategy

The analysis proceeds in two main stages. In the first stage, officer perceptions toward body-worn cameras are examined across a series of perceptual domains including their general perceptions and openness to body-worn cameras and their perceptions of the effect of body-worn cameras on citizen behavior, their own behavior, the behavior of their fellow officers, and the impact of body-worn cameras on their own and their fellow officers’ use of force, number of external (citizen-generated) complaints, and the number of internal complaints. In the second stage of the analysis, mean differences are compared across the series of perceptual domains by officer gender and officer race to determine if perceptions are significantly different between male and female officers and/or White and Non-White officers. Finally, Pearson’s correlation coefficients are computed in order to assess any potentially significant correlations between officer age and officer years of experience and officer perceptions.

Results

Table 1 provides the mean response for each item and Fig. 1 graphically illustrates the officers’ general perceptions of and openness to

Table 1
Officer demographics

	M/%	SD	Minimum	Maximum
<i>Officer Demographics</i>				
<i>Officer Gender</i>				
Male	88.5%	–	–	–
Female	11.5%	–	–	–
<i>Officer Race</i>				
White	85.4%	–	–	–
Black	10.4%	–	–	–
Other	4.2%	–	–	–
Officer Age	35.64	7.99	24.00	59.00
Officer Years of Experience	6.66	5.10	0.25	19.00

the use of body-worn cameras in law enforcement. Six in ten officers (62.7%) agree or strongly agree that their agency should adopt body-worn cameras for all of their officers ($M = 3.82$; $SD = 0.95$) and 77% agree or strongly agree that they would feel comfortable wearing body-worn cameras ($M = 4.03$; $SD = 0.96$). A considerably smaller percentage of officers (18.7%) agreed or strongly agree that they would feel safer wearing body-worn cameras ($M = 2.56$; $SD = 1.07$).

The next series of perceptual domains focus on officer perceptions of the effect of body-worn cameras on citizen behavior, their own behavior, and the behavior of their fellow officers. As displayed in Fig. 2, 40.7% of the officers believe that body-worn cameras would improve citizen behavior ($M = 2.96$; $SD = 1.19$). Fewer of them however, (19.8%) believe that the body-worn cameras would improve their own behavior ($M = 2.56$; $SD = 1.00$) and similarly, just 29.7% agree that body-worn cameras would increase their likelihood of behaving “by-the-book” ($M = 2.76$; $SD = 1.08$). A strong majority of officers (84.4%) agreed or strongly agreed that wearing body-worn cameras would *not* reduce their likelihood of responding to calls for service ($M = 4.34$; $SD = 0.79$) (see Fig. 3).

More officers (42.9%) believed that the body-worn cameras would increase the “by the-book” behavior of *other officers*, ($M = 3.16$; $SD = 0.92$) than thought the body-worn cameras would impact their own behavior (19.8%). Similarly, the officers believed it was more likely that the body-worn cameras would reduce *other officers’* willingness to respond to calls for service than their own. As above, 84.4% of the respondents agreed or strongly agreed with the statement that “body-worn cameras would not reduce my willingness to respond to calls for service”; a smaller percent (63.7%) believed the same for other officers ($M = 3.57$; $SD = 0.96$) (see Figure 4).

The final two perceptual domains evaluate officer perceptions of the impact of body-worn cameras on their own use of force, external (citizen-generated) complaints, and internal complaints as well as their perceptions of the influence of body-worn cameras on their fellow officers’ use of force, external (citizen-generated) complaints, and internal complaints. As seen in Fig. 5, very few officers (3.3%) agree or strongly agree with the statement that wearing body-worn cameras would reduce their own use of force ($M = 2.10$; $SD = 0.79$). More of them, but still a minority, believe that the body-worn cameras would reduce the number of external (30.8%, $M = 2.90$; $SD = 1.15$) and internal (27.5%, $M = 2.82$; $SD = 1.14$) complaints against them. On projections regarding the impact of the cameras on the agency’s overall levels of force and internal and external complaints, the officers expect more impact agency-wide than they had projected for themselves. As above, just 3.3% believed that the body-worn cameras would impact their own use of force, but 20% believed that the body-worn cameras would reduce agency levels of use of force ($M = 2.64$; $SD = 0.99$). The corresponding percentages for external complaints was 30.8% and 45.1% ($M = 3.04$; $SD = 1.14$); and the percentages for internal complaints was 27.5% and 36.3% ($M = 2.99$; $SD = 1.06$). (See Fig. 6.)

The second and final stage of the analysis is presented in Table 2. As can be seen there were, by and large, more similarities than differences in the officer ratings across the series of perceptual domains between the male and female officers and between the White and Non-White officers. Nevertheless, a few significant differences did emerge. For example, male officer perceptions were generally and significantly more positive in their perception that wearing body-worn cameras would improve their own behavior compared with female officers (male officers: $M = 2.63$ versus female officers: $M = 2.00$; $p < .05$), whereas female officers were more likely to agree that body-worn cameras would reduce both external (male officers: $M = 2.99$ versus female officers: $M = 3.50$; $p < .05$) and internal (male officers: $M = 2.93$ versus female officers: $M = 3.50$; $p < .05$) complaints against their fellow officers. Turning toward the mean difference comparisons between White and Non-White officers, the only significant mean difference was for the officers’ perception of the effect of body-worn cameras on their own use of force. Specifically, Non-White police officers rated significantly higher

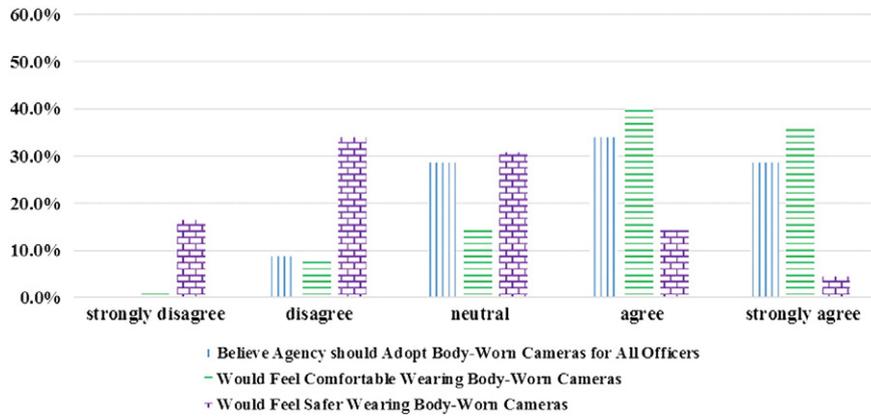


Fig. 1. Officer Perceptions of Body-Worn Cameras. Note. Believe Agency should Adopt Body-Worn Cameras for All Officers (M = 3.82; SD = 0.95); Would Feel Comfortable Wearing Body-Worn Camera (M = 4.03; SD = 0.96); and Would Feel Safer Wearing Body-Worn Cameras (M = 2.56; SD = 1.07).

agreement in their perception that body-worn cameras would reduce their own use of force compared with White officers (Non-White officers: M = 2.54 versus White officers: M = 2.03; $p < .05$). Finally, only two significant correlations were observed with older officers reporting lower levels of agreement with the potential for body-worn cameras reducing internal complaints against them ($r = -.18, p < .05$) and officers with more years of experience reporting higher levels of agreement in their perception that wearing body-worn cameras would increase their likelihood of behaving “by-the-book” ($r = .18, p < .05$).

Discussion

The profession of policing has recently been witness to and consumer of a number of technological advancements and innovations such as the use of GPS monitoring devices (Hughes & Burton, 2014), in-car cameras (IACP, 2003, 2004), and closed circuit television (CCTV) cameras (Menichelli, 2014; Surette, 2005). However, perhaps one of the most recent and significant advancements to date in policing is the use of body-worn cameras in law enforcement. In this same vein, academic and public discourse in the media around the use of body-worn cameras in policing has begun to reach near epic levels, primarily since recent high profile cases such as the tragic death of Michael Brown, a Ferguson, Missouri teenager who was shot and killed by a law enforcement officer (in the absence of video). While all of this attention has been cast toward a technological innovation such as the implementation of body-worn cameras in law enforcement, there has yet to have been any empirically sound and published research on the perceptions of the consumers of this technology (e.g., the police). In

acknowledgement of this deficiency in research and the importance of the body-worn camera debate, the current study sought out to provide one of the first ever studies to date to assess in detail general police officer perceptions of body-worn cameras and to evaluate their perception of the effect that wearing body-worn cameras may have on citizen behavior, their own behavior, the behavior of their fellow officers, and the impact of body-worn cameras on their own and their fellow officers’ use of force, number of external (citizen-generated) complaints, and number of internal complaints. A number of important findings emerged from this effort.

First, the officers generally reported considerably high rates of agreement to questions such as they believe that their agency should adopt body-worn cameras for all of their police officers, and that they would feel comfortable wearing body-worn cameras. Second, the officers demonstrated fairly high levels of agreement that they felt that citizen behavior would improve if they (the officers) were wearing body-worn cameras. Third, while the ratings were more mixed toward the officers’ perception that wearing body-worn cameras would improve their own behavior and increase their likelihood of behaving “by-the-book”, they reported resoundingly more agreement that wearing body-worn cameras would *not* reduce their willingness to respond to calls for service. Fourth, much of the same sentiment was observed when considering the effect of body-worn cameras on their fellow officers’ behavior, although the officers’ were generally in greater agreement that the body-worn cameras would improve the behavior of their fellow officers and increase their fellow officers’ likelihood of behaving “by-the-book” relative to their perceived impact on their own behavior. Comparatively, the officers also reported noticeably high levels of agreement that the use of body-worn cameras would *not* reduce their fellow officers’

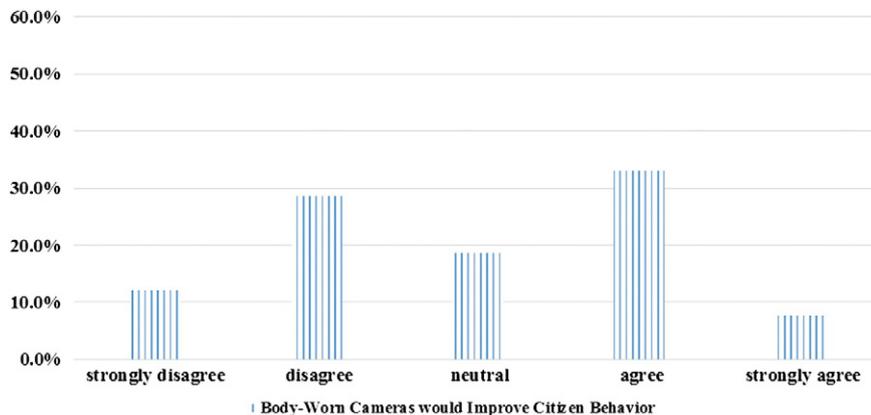


Fig. 2. Officer Perceptions of the Effect of Body-Worn Cameras on Citizen Behavior. Note. Body-Worn Cameras would Improve Citizen Behavior (M = 2.96; SD = 1.19).

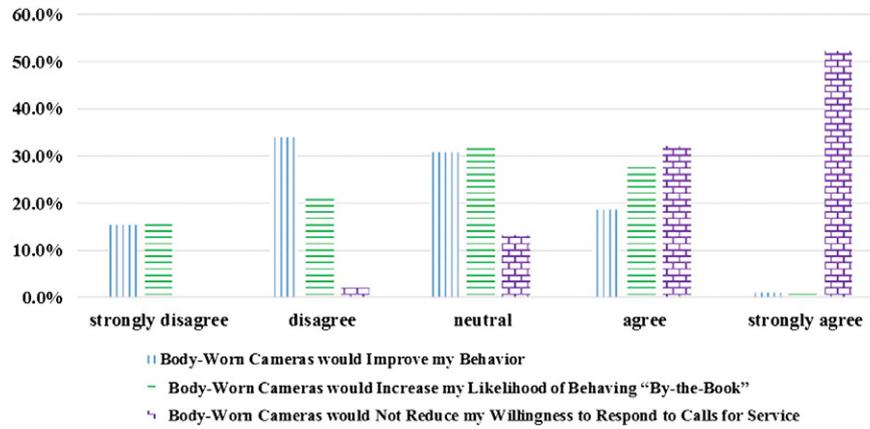


Fig. 3. Officer Perceptions of the Effect of Body-Worn Cameras on *Their Own Behavior*. Note. Body-Worn Cameras would Improve my Behavior (M = 2.56; SD = 1.00); Body-Worn Cameras would Increase my Likelihood of Behaving “By-the-Book” (M = 2.76; SD = 1.08); and Body-Worn Cameras would Not Reduce my Willingness to Respond to Calls for Service (M = 4.34; SD = 0.79).

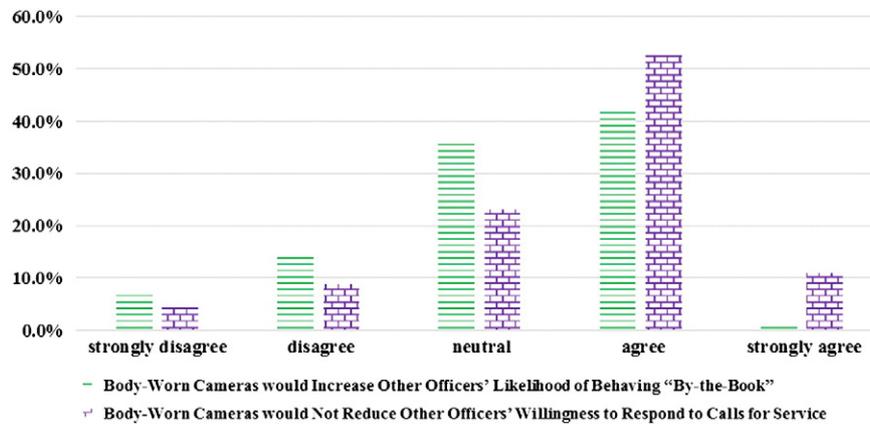


Fig. 4. Officer Perceptions of the Effect of Body-Worn Cameras on *Their Fellow Officers' Behavior*. Note. Body-Worn Cameras would Increase Other Officers' Likelihood of Behaving “By-the-Book” (M = 3.16; SD = 0.92); and Body-Worn Cameras would Not Reduce Other Officers' Willingness to Respond to Calls for Service (M = 3.57; SD = 0.96).

willingness to respond to calls for service. Finally, the officers were somewhat mixed on their perceptions of the impact of wearing body-worn cameras on their own use of force, but they were much more in agreement that wearing body-worn cameras would reduce their and, more notably, their fellow officers' number of external and internal complaints.

These findings have several implications for policing in practice and for academic discourse on the role of technology in general and body-worn cameras specifically in policing. For instance, general knowledge of police officer perceptions of body-worn cameras can address the discussion that exists within many police departments; that front-line officers would be initially hesitant. Often, police departments are faced

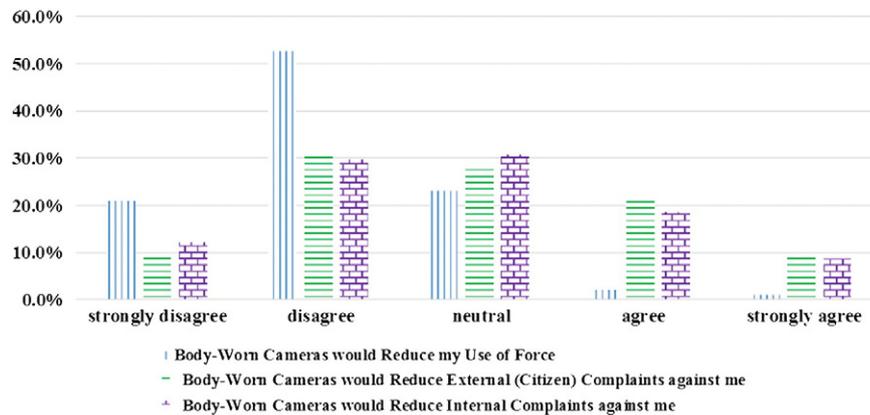


Fig. 5. Officer Perceptions of the Effect of Body-Worn Cameras on *Their Own Use of Force, Number of External Complaints, and Number of Internal Complaints*. Note. Body-Worn Cameras would Reduce my Use of Force (M = 2.10; SD = 0.79); Body-Worn Cameras would Reduce External (Citizen) Complaints against me (M = 2.90; SD = 1.15); and Body-Worn Cameras would Reduce Internal Complaints against me (M = 2.82; SD = 1.14).

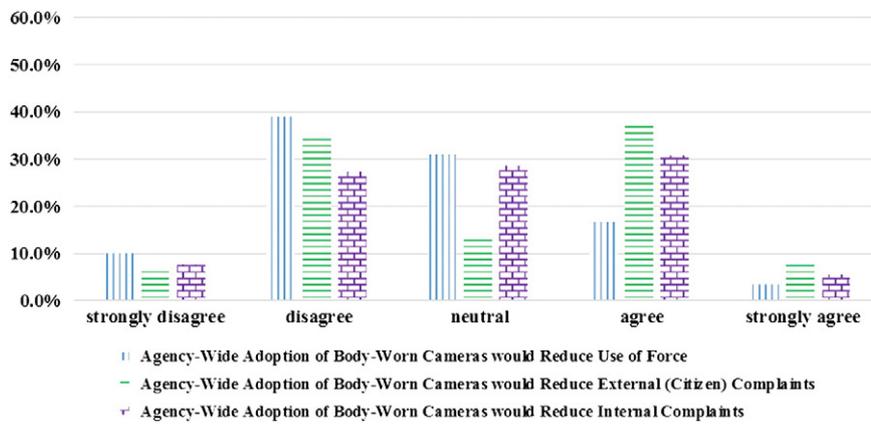


Fig. 6. Officer Perceptions of the Effect of Body-Worn Cameras on Their Fellow Officers' Use of Force, Number of External Complaints, and Number of Internal Complaints. Note. Agency-Wide Adoption of Body-Worn Cameras would Reduce Use of Force (M = 2.64; SD = 0.99); Agency-Wide Adoption of Body-Worn Cameras would Reduce External (Citizen) Complaints (M = 3.04; SD = 1.14); and Agency-Wide Adoption of Body-Worn Cameras would Reduce Internal Complaints (M = 2.99; SD = 1.06).

with questions that impact their willingness to adopt novel technologies (e.g. Are police officers "supportive" with wearing BWCs while on duty?). Direct evidence of officer perceptions, such as what has been revealed in the current study, will help inform and educate police departments surrounding their decision to adopt body-worn cameras.

Additionally, it is recommended that police departments rigorously assess their own organizational readiness prior to implementing body-worn cameras, and the current study provides the necessary starting point. Specifically, decreasing the anecdotal evidence about officers' beliefs on body-worn cameras can better set in motion empirically-based practices that benefit the officer and department. As officers generally believe that their department should adopt body-worn cameras, organizational support can be consistent across the department from the beginning. Police departments across the United States have unique daily challenges facing patrol officers, making consistent department policies on evidence collection, training, and education of body-worn cameras a must. As the current study gathered baseline data on officer perceptions prior to recent high profile cases (e.g. Ferguson, Missouri), outcomes can provide an uninhibited foundation

for such education. Lastly, the current study is capable of directly informing future practices in the field of policing. Ever apparent, the use of technology in policing is drastically on the rise. Many of the recent news media responses to tragic events in policing have re-introduced the potential impact of technology when addressing citizen-police interactions. Calls for body-worn cameras in departments across the United States are increasing, and as a result video recording technology is here to stay.

It is important to note a few limitations of the current study in order to contextualize the current findings. First, the reported findings are entirely focused on patrol officers within one large metropolitan police department. The potential impact of body-worn cameras could presumably affect non-patrol officers in unique ways not discussed or able to be addressed in the current study. Thus, future research on police body-worn cameras should take into consideration differential experiences of officers. Second, although we assess officer perceptions toward body-worn cameras, there are many perceptions of body-worn cameras not measured in the current study. Future studies should continue to explore alternative factors impacting police officer perceptions of body-worn cameras to better understand organizational factors that may impact implementation.

Table 2
Officer perception similarities/differences by officer gender, race, age, and years of experience

	Male Officers	Female Officers	Non-White Officers	White Officers	Officer Age	Officer Years of Experience
	Mean	Mean	Mean	Mean	r	r
<i>Officer Perceptions of Body-Worn Cameras</i>						
Believe Agency should Adopt Body-Worn Cameras for All Officers	3.83	3.80	4.00	3.79	-.06	-.04
Would Feel Comfortable Wearing Body-Worn Cameras	4.07	3.70	4.00	4.04	-.01	.04
Would Feel Safer Wearing Body-Worn Cameras	2.47	3.30	2.92	2.50	-.12	-.05
<i>Officer Perceptions of the Effect of Body-Worn Cameras on Citizen Behavior</i>						
Body-Worn Cameras would Improve Citizen Behavior	2.95	3.00	3.31	2.90	-.08	.04
<i>Officer Perceptions of the Effect of Body-Worn Cameras on Their Own Behavior</i>						
Body-Worn Cameras would Improve my Behavior	2.63	2.00	2.62	2.55	.03	.13
Body-Worn Cameras would Not Reduce my Willingness to Respond to Calls for Service	4.34	4.40	4.08	4.39	.02	-.06
Body-Worn Cameras would Increase my Likelihood of Behaving "By-the-Book"	2.79	2.50	2.92	2.73	.04	.18
<i>Officer Perceptions of the Effect of Body-Worn Cameras on Their Fellow Officers' Behavior</i>						
Body-Worn Cameras would Not Reduce Other Officers' Willingness to Respond to Calls for Service	3.61	3.20	3.46	3.59	.03	.02
Body-Worn Cameras would Increase Other Officers' Likelihood of Behaving "By-the-Book"	3.19	3.00	3.46	3.12	-.05	.10
<i>Officer Perceptions of the Effect of Body-Worn Cameras on Their Own Use of Force, Number of External Complaints, and Number of Internal Complaints</i>						
Body-Worn Cameras would Reduce my Use of Force	2.09	2.20	2.54	2.03	.08	.10
Body-Worn Cameras would Reduce External (Citizen) Complaints against me	2.89	3.00	2.77	2.92	-.10	.06
Body-Worn Cameras would Reduce Internal Complaints against me	2.80	3.00	3.00	2.79	-.18	-.06
<i>Officer Perceptions of the Effect of Body-Worn Cameras on Their Fellow Officers' Use of Force, Number of External Complaints, and Number of Internal Complaints</i>						
Agency-Wide Adoption of Body-Worn Cameras would Reduce Use of Force	2.63	2.80	2.83	2.62	.04	.05
Agency-Wide Adoption of Body-Worn Cameras would Reduce External (Citizen) Complaints	2.99	3.50	3.08	3.04	-.02	-.01
Agency-Wide Adoption of Body-Worn Cameras would Reduce Internal Complaints	2.93	3.50	3.15	2.96	-.09	-.06

Note. r = Pearson Correlation Coefficient. Significant mean differences and correlations (p < .05) noted in italics.

Lastly, the evidence presented here only attempts to shed light on police officer baseline perceptions of body-worn cameras. It is possible that perceptions of the impact of body-worn cameras will change over time, particularly for patrol officers using the devices. And, it is to the question posed that we anticipate providing answers for as the randomized experiment in Orlando Police Department (OPD) concludes.

Taken together, the results from the current study, which is one of the first ever studies of its kind to date, suggests that police officers appear to be receptive and willing consumers of adopting and implementing body-worn cameras in their profession. Furthermore, the police officers indicate that they do not believe that the use of this technology will have any significant effect on their or their fellow officers' willingness to respond to calls for service. In addition, there are noteworthy and positive findings concerning officer perceptions of the impact of body-worn cameras on their and their fellow officers' use of force, number of external (citizen-generated) complaints, and the number of internal complaints. In the end, we believe this research has taken the first and groundbreaking step in revealing the receptiveness for and potential usefulness of body-worn cameras in law enforcement for improving citizen and police officer behavior and possibly reducing other negative outcomes that can result from police-citizen interactions (e.g., officer injury, subject injury, lawsuits). It is at this point where we wait for future empirical evidence derived from randomized experimental designs to accumulate in order to isolate the effect of these devices on police officer behavior and police-citizen encounter outcomes.

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Appendix 1. Police Officer Perceptions of Body-Worn Cameras: Baseline Survey

Q1. What are your perceptions about the impact of body-worn cameras in policing?

Please rate your level of "agreement" for the following statements.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I think this agency should adopt body-worn cameras for all front-line police officers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would feel comfortable wearing a body-worn camera.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2. What are your perceptions about wearing a body-worn camera while on duty?

Please rate your level of "agreement" for the following statements.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Wearing a body-worn camera would improve my behavior in the field.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wearing a body-worn camera would improve the behavior of citizens I contact in the field.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wearing a body-worn camera would make me feel safer while on the job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3. What impact would wearing a body-worn camera in the field have on your own behavior while on duty?

Please rate your level of "agreement" for the following statements.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Wearing a body-worn camera would reduce my use of force against subjects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wearing a body-worn camera would reduce the number of citizen (external) complaints I would receive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wearing a body-worn camera would reduce the number of department (internal) complaints filed against me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wearing a body-worn camera would reduce my willingness to respond to calls for service.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wearing a body-worn camera would increase the likelihood that my behavior would be "by-the-book."	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4. Suppose the "Agency" adopted the use of body-worn cameras for all of its front-line officers. What impact would wearing body-worn cameras have on other officers' (not you) behavior?

Please rate your level of "agreement" with the following statements.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
The agency-wide adoption of body-worn cameras would reduce other officers' use of force against subjects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The agency-wide adoption of body-worn cameras would reduce the number of citizen complaints submitted against other officers'.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The agency-wide adoption of body-worn cameras would reduce the number of internal complaints submitted against other officers'.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The agency-wide adoption of body-worn cameras would reduce other officers' willingness to respond to calls for service.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The agency-wide adoption of body-worn cameras would increase the likelihood that other officers' behavior would be "by-the-book."	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

References

Blackwell, B., & Vaughn, M. S. (2003). Police civil liability for inappropriate response to domestic assault victims. *Journal of Criminal Justice*, 31, 129–146.
 Culver, L. (2004). The impact of new immigration patterns on the provision of police services in midwestern communities. *Journal of Criminal Justice*, 32, 39–344.
 Farrar, W., & Ariel, B. (2013). *Self-awareness to being watched and socially desirable behavior: A field experiment on the effect of body-worn cameras and police use of force*. Washington, DC: Police Foundation.

- Floyd, et al. vs. City of New York, et al. Case 1:08-cv-01034-SAS-HBP 25-28 (New York, 2013).
- Hughes, T. T., & Burton, C. (2014). Police GPS Surveillance on Vehicles and the Warrant Requirement: "For a While I've Been Watching You Steady". *American Journal of Criminal Justice*, 38(4), 1–16.
- International Association of Chiefs of Police (2003). *Impact of video enhancement on modern policing*. Alexandria, VA: IACP.
- International Association of Chiefs of Police (2004). *Impact of video enhancement on modern policing: Research and best practices from the IACP study on in-car cameras*. Alexandria, VA: International Association of Chiefs of Police.
- Katz, C., & Kurtenbach, M. (2014, August 8). *Deploying Officer Body-Worn Cameras in Phoenix*. Washington, DC: Office of Justice Programs Diagnostic Center.
- Kowalski, B. R., & Lundman, R. J. (2007). Vehicle stops by police for driving while Black: Common problems and some tentative solutions. *Journal of Criminal Justice*, 35, 165–181.
- McElvain, J. P., & Kposowa, A. J. (2004). Police officer characteristics and internal affairs investigations for use of force allegations. *Journal of Criminal Justice*, 32, 265–279.
- Menichelli, F. (2014). Technology, context, users: a conceptual model of CCTV. *Policing: An International Journal of Police Strategies & Management*, 37(2), 389–403.
- Mesa Police Department (2013). *On-officer body camera system: Program evaluation and recommendations*. Mesa, AZ: Mesa Police Department.
- Phillips, S., & Varano, S. P. (2008). Police criminal charging decisions: An examination of post-arrest decision-making. *Journal of Criminal Justice*, 36, 307–315.
- Police Executive Research Forum (2012). *Critical issues in policing series*. Washington, DC: Police Executive Research Forum.
- Ratcliffe, J. H., Taniguchi, T., & Taylor, R. B. (2009). The Crime Reduction Effects of Public CCTV Cameras: A Multi-Method Spatial Approach. *Justice Quarterly*, 26(4), 746–770.
- Rosenbaum, D. P., Schuck, A. M., Costello, S. K., Hawkins, D. F., & Ring, M. K. (2005). Attitudes toward the police: The effects of direct and vicarious experience. *Police Quarterly*, 8(3), 343–365.
- Surette, R. (2005). The thinking eye: Pros and cons of second generation CCTV surveillance systems. *Policing: An International Journal of Police Strategies & Management*, 28(1), 152–173.
- Weir, H., Stewart, D. M., & Morris, R. (2012). Problematic alcohol consumption by police officers and other protective service employees: A comparative analysis. *Journal of Criminal Justice*, 40, 72–82.
- Weitzer, R. (2002). Incidents of police misconduct and public opinion. *Journal of Criminal Justice*, 30, 397–408.
- Welsh, B. C., & Farrington, D. (2011). Is CCTV Effective in Preventing Crime in Public Places? *Evidence Based Policing*, 265–268.
- White, M. D. (2013, September 5). *Personal interview with Commander Michael Kurtenbach of the Phoenix (Arizona) Police Department and Professor Charles Katz of Arizona State University about the Phoenix body-worn camera project*.
- White, M. D. (2014). *Police Officer Body-Worn Cameras: Assessing the Evidence*. Washington, DC: U.S. Department of Justice: Office of Justice Programs Diagnostic Center.
- Zhao, J., Lovrich, N. P., & Robinson, T. (2001). Community policing: Is it changing the basic functions of policing?: Findings from a longitudinal study of 200+ municipal police agencies. *Journal of Criminal Justice*, 29, 365–377.
- Zhao, J., Ren, L., & Lovrich, N. P. (2010). Budgetary support for police services in U.S. municipalities: Comparing political culture, socioeconomic characteristics and incrementalism as rival explanations for budget share allocation to police. *Journal of Criminal Justice*, 38, 266–275.