Examining Police Officers’ Resistance to Change and Body-Worn Cameras

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EDD Cohort 14
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Problem

- Resistance to technology change/Body-Worn Cameras

- Balci, Bedué, and Franzmann (2013)—user resistance to change is substantial because it can affect future technology acceptance.

- Koper, Lum, and Willis (2014)—Police departments implement change without knowledge about limitations.
The purpose of the current study was to examine whether experiences with technology or the perceived usefulness of body-worn cameras predict resistance to the cameras in order to determine where resistance to body-worn cameras possibly exists.
Change: 70% of change initiatives fail (Beer & Nohria, 2000).

Resistance to change—Dispositional resistance or Predisposition to resist (Oreg, 2003).

Experience: Obstacles to change—Time with technology, frequency of use with technology, perceived competency with technology, and opportunity to use technology (Lankton, Wilson, & Mao, 2010; Partala & Saari, 2015; Varma & Marler, 2013).

Technology Acceptance Model: TAM (Davis, 1989)
- PU—Perceived Usefulness
- PEOU—Perceived Ease of Use
Research Questions

To what extent are police officers dispositionally resistant to change?

To what extent are police officers resistant to body-worn cameras?

What is the relationship between officers' experiences with technology and resistance to body-worn cameras?

What is the relationship between officers' perceived usefulness of body-worn cameras and resistance to body-worn cameras?

Which variable primarily predicts resistance to the use of body-worn cameras: Officers' experiences or perceived usefulness?
Study Significance

- Enhance police management insight
- Prepare police management for upcoming camera programs
- Discern the evolution of resistance
Design

- Quantitative design
- Descriptive Statistics and One-sample $t$ test
- Correlations
- Linear and Multiple Regressions
Participants

- 11 police agencies in the study area
- County in the Midwest USA
- 250 police officers (full-time, part-time, and retired)
- Purposive Sample
- 55 responded
- 48 used \((n = 48)\)
Participant Demographics

- Non body-worn cameras (39 participants)
- Male (44) Females (4)
- Ages of 31 to 40
- 10 to 14 years of law-enforcement experience.
- Patrol officers
- Caucasian (44), African American (1), Hispanic (2), and Asian/Pacific Islander (1)
- Bachelor’s degree
- Department size–21 to 40 total officers.
Instruments Utilized

- Resistance to Change Scale–RTC (Oreg, 2003)
  Cronbach's $\alpha = .80$
- Change Attitude Scale–CA (Oreg, 2006)
  Cronbach's $\alpha = .97$/Modified
- Experience with Technology–Pilot Study
  Cronbach's $\alpha = .78$
- Perceived Usefulness–PU (Davis, 1993)
  Cronbach's $\alpha = .89$
- Perceived Ease of Use–PEOU (Davis)
  Cronbach's $\alpha = .87$
Data Collection

- Survey through countywide email
- August through November 2016
- Reminder emails—Beginning of each month
Research Question 1: To what extent are police officers dispositionally resistant to change?

RTC scale midpoint = 72 out of 126

$(M = 61.51, SD = 11.78)$

$t(42) = -5.84, p = .000$
Research Question 2: To what extent are police officers resistant to body-worn cameras?

Modified CA scale midpoint = 60 out of 105

\( M = 43.26, \ SD = 21.69 \)

\( t(45) = -5.23, \ p = .000 \)
Research Question 3: What is the relationship between officers' experiences with technology and resistance to body-worn cameras?

\[ \beta = -0.32, \ t(43) = -2.19, \ p = 0.034 \]

10% of the variance
Figure 1. Scatterplot depicting the relationship between experience with technology and resistance to body-worn cameras.
Findings

- Research Question 4: What is the relationship between officers' perceived usefulness of body-worn cameras and resistance to body-worn cameras?

\[ \beta = -0.64, \ t(39) = -5.18, \ p = .000 \]

41% of the variance
Figure 2. Scatterplot depicting the relationship between perceived usefulness and resistance to body-worn cameras.
Additional findings on Research Question 4:

Covariate PEOU—Multiple Regression PU and PEOU

- $F(2, 37) = 43.34$, $p = .000$, $R^2 = .70$

- $PU \ (\beta = -.35, \ t(37) = -3.44, \ p = .001)$

- $PEOU \ (\beta = -.61, \ t(37) = -6.04, \ p = .000)$
Figure 3. Scatterplot depicting the relationship between perceived ease of use of body-worn cameras and resistance to body-worn cameras.
**Table 1**  

*Pearson Product Correlation, Beta Weights, and t-values for Multiple Regression: Perceived Usefulness and the Covariant of Perceived Ease of Use of Body-Worn Cameras*

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>$r$</th>
<th>$\beta$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Usefulness of BWC</td>
<td>-0.64*</td>
<td>-0.35</td>
<td>-3.44</td>
</tr>
<tr>
<td>Perceived Ease of Use of BWC</td>
<td>-0.78*</td>
<td>-0.61</td>
<td>-6.04</td>
</tr>
</tbody>
</table>

*p < .01*
Research Question 5: Which variable primarily predicts resistance to the use of body-worn cameras: Officers’ experiences or perceived usefulness?

\[ F(2, 37) = 14.91, \ p = .000, \ R^2 = .47 \]

PU: \[ \beta = - .58, \ t(37) = - 4.58, \ p = .000 \]

EXP: \[ \beta = - .22, \ t(37) = - 1.78, \ p = .092 \]
Table 2

**Pearson Product Correlation, Beta Weights, and t-values for Multiple Regressions: Experience and Perceived Usefulness as Predictors**

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>$r$</th>
<th>$\beta$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience with Prior Technology</td>
<td>-.36</td>
<td>-.22</td>
<td>-1.73</td>
</tr>
<tr>
<td>Perceived Usefulness of BWC</td>
<td>-.63*</td>
<td>-.58</td>
<td>-4.58</td>
</tr>
</tbody>
</table>

* $p < .01$
Conclusions–Research Question 1

- Participant police—Low predisposition to resist change
- Climate in which officers work
- May feel that new changes are needed
Conclusions–Research Question 2

- Low resistance to body–worn cameras.

- Resistance to body–worn cameras/may not be an issue prior to implementation.
Conclusions–Research Question 3

- Less experience with other technologies—officers might be resistive to using body-worn camera technology.

- Officers do not employ their prior experience over other variables such as PU and PEOU.
Conclusions—Research Question 4

- Officers’ performance is important in relationship to resistance to the cameras
- Officers thinking about the amount of effort to use the device even before implementation
- Effort needed to use the body-worn camera could shape officers’ performance
- Officers might not always be content with cameras’ use or benefits
- PEOU—Important to identify in terms of officers’ resistance
Conclusions–Research Question 5

- Experiences with technologies—Smaller role in officers’ attitudes toward resistance than expected
- Experience—most likely more multifaceted
- Perceived usefulness better predictor
Implications

- RTC–Management tool
- Police training/PEOU–Starting point
- BWC program implementation–Discovering the limitations in the implementation process and functionality of body–worn cameras.
- Cameras angles–Perspective bias (Boivin, Gendron, Faubert, & Poulin, 2016).
Limitations

- Low participation rate
- Lack of other research
- Lack of variables
- Use of work emails
- Rural demographic
- Experience with technology items
Recommendations

- Methodology

- Variables, such as self-efficacy, job satisfaction, and workload—Change results

- Diversity of participants—Participants from larger agencies

- Experience with technology—validity

- Use personal emails
References


