2021

# BODY-WORN CAMERAS AND ORGANIZATIONAL STRESS IN CANADIAN POLICING: A QUALITATIVE STUDY

Chelsea Doiron
*Wilfrid Laurier University*, doir7050@mylaurier.ca

2021

# BODY-WORN CAMERAS AND ORGANIZATIONAL STRESS IN CANADIAN POLICING: A QUALITATIVE STUDY

Chelsea Doiron
*Wilfrid Laurier University*, doir7050@mylaurier.ca

# BODY-WORN CAMERAS AND ORGANIZATIONAL STRESS IN CANADIAN POLICING: A QUALITATIVE STUDY

by

Chelsea Doiron

Bachelor of Arts (Honours), Sociology and Criminal Justice and Public Policy,

University of Guelph, 2019

THESIS

Submitted to the Department/Faculty of

Criminology

In partial fulfillment of the requirements for

Master of Arts

In Criminology

Wilfrid Laurier University

## Abstract

Body-worn camera (BWC) technology has gained traction in North American police services as a tool to enhance police transparency and accountability. To date, the research available on BWCs has focused on the impact BWCs have on police services, investigations, officer and citizen behaviour, and, police officers' and community members' attitudes towards BWCs (Lum et al., 2019). The vast majority of this existing research has been quantitative in nature and has been conducted in the United States, where police practices and policies differ from those in Canada. While there have been a number of pilot projects and research evaluations conducted on BWCs in Canada, there is still a great deal we do not know. Absent from much of the literature on BWCs is the impact the technology has on officers' organizational stress and well-being. This is surprising considering that policing is identified as one of the most stressful occupations (Noblet et al., 2009). The present study seeks to address this gap in knowledge by conducting a qualitative analysis of a mid-size Canadian police service's adoption and implementation of a BWC one-year pilot project. Through interviews with fifteen patrol officers, I examine how patrol officers' 'technological frames' (Orlikowski and Gash, 1994) shape how officers have come to make sense of and use BWCs in their everyday practices. I argue that officers make sense of and use BWCs in line with traditional frontline policing technological frames. While most officers perceive positive outcomes of the technology for evidence and investigative purposes, they also perceive the technology to diminish their autonomy and negatively impact the 'craft' of policing. Further, drawing on organizational justice theory, with specific attention to the theoretical constructs of distributive justice, procedural justice and interactional justice, I explore how officers' perceptions of BWCs may impact their overall stress and well-being. Specifically, I argue that BWCs can create stress for officers when they perceive

BWCs as a form of injustice through the outcomes of BWCs (distributive justice), the protocols governing BWCs (procedural justice) and how they, as officers, are being treated by their service (interactional justice).

## Acknowledgements

First and foremost, I want to thank my incredible supervisor, Carrie Sanders. Your guidance and support throughout this entire process over the past two years has helped shape me into the academic I am today. I could not have asked for a more supportive supervisor during a global pandemic. Thank you for continuing to encourage me and pushing me to be a better writer. I want to thank you for the opportunity to work alongside of you as a research assistant. It was an honour to work with you on projects. I admire your work ethic, dedication to your students and professionalism. Thank you for your constant support in helping me produce a thesis that I am proud of.

Thank you to my second supervisor, Alana Saulnier. Thank you so much for allowing me to be a part of your research and data collection. I am so honoured that I was able to work alongside such an established and professional researcher. Your work ethic and dedication to research inspires me to carry those same principles in my future professional endeavours.

Last but not least, thank you to my friends and family. To the friends I have made throughout this program, I am grateful to have shared my struggles and laughter with you. Thank you to my family (Vlad, Mom, Dad, Cody, Ioana, Snezana and Tijana) for supporting me in this chapter of my life. I am very grateful to have a support system that allowed me to pursue my academic goals. Thank you for cheering my successes and supporting me during my hardships.

# Table of Contents

**Abstract** ..... **i**

**Acknowledgements** ..... **iii**

**Chapter One: Introduction** ..... **1**
Thesis Outline ..... 5

**Chapter Two: Literature Review** ..... **7**
History of BWC Technology ..... 7
Body-Worn Camera Research ..... 8
Officers' Perceptions of the Technology ..... 8
BWCs and Police Organizations ..... 10
Effects of BWCs on Police Organizations in Canadian Research ..... 10
Officer Perceptions of BWCs in Canadian Research ..... 11
Stress Literature ..... 12
Operationalization of the Concept of Stress in Policing ..... 12
General Overview of Stressors in Policing ..... 13
Connections to BWCs as a Stressor in Policing ..... 14
Leiter and Maslach's Areas of Work Life ..... 15

**Chapter Three: Theoretical Framework** ..... **17**
Organizational Justice Theory ..... 17
Foundations of Organizational Justice Theory ..... 17
Distributive Justice ..... 18
Procedural Justice ..... 18
Interactional Justice ..... 20
Organizational Justice and Stress within Policing ..... 21
Conclusion ..... 21

**Chapter Four: Research Methodology** ..... **23**
Constructivist Grounded Theory ..... 23
Study Design and Procedure ..... 24
Figure 1: Officer Demographics ..... 26
Interview process ..... 26
Initial Coding ..... 28
Focused Coding and Analytic Memo-writing ..... 28
Axial Coding ..... 29
Concept Mapping ..... 29

**Chapter Five: Body-Worn Cameras Through Officers' Technological Frames** ..... **30**
Introduction ..... 30
**Nature of Technology: Evidential Value, Protection and Functionality** ..... 31
Evidential and Investigative Value ..... 31
BWCs and Protection ..... 34
Functionality of BWCs ..... 35
**Technology Strategy: Unclear Directives, Risk Management and Organizational Surveillance** ..... 36
Institutional Risk Management ..... 36
Organizational Surveillance ..... 37
Perceptions of Unclear Directive and Policy during Implementation ..... 38

**Technology in Practice and the Consequences of its Use: Administrative Burden, Loss of Discretion and Work Morale** ..... 40
Administrative Burden ..... 41
Police Discretion and Autonomy ..... 43
Work Relationships and Morale ..... 46
Discussion ..... 48

**Chapter Six: BWCs and Organizational Justice ..... 52**
Introduction ..... 52
Organizational Justice and Organizational Stress ..... 52
**Distributive Justice** ..... 54
BWCs Impact on work-to-reward ..... 55
Stress Through Unfair Allocation of Agency Resources ..... 56
**Procedural Justice** ..... 58
Absence of Voice in Technology Adoption and Implementation ..... 58
Inconsistency with Organizational Directives ..... 60
**Interactional Justice** ..... 62
Officer Distrust in Police Service ..... 62
Unfair Discipline ..... 64
Discussion ..... 65

**Chapter Seven: Discussion ..... 68**
Summary of Findings ..... 69
Technological Frames and Body-Worn Cameras ..... 70
Organizational Justice & Body-Worn Cameras ..... 71
Research Limitations and Future Directions ..... 72

**Appendix ..... 73**
Operationalized Code Chart ..... 73
Preliminary Concept Maps ..... 77
Interview Consent Form ..... 78
Thank You Letter ..... 79
BWC - Interview Guide ..... 81

**References ..... 86**

## Chapter One: Introduction

Body-worn cameras (BWCs) have been rapidly adopted by police services with the hopes that the technology will reduce police use of force and complaints against officers, while promoting transparency in policing (Adams and Mastracci, 2019). BWCs are a "mobile audio and video device that allows officers to record what they see and hear," (NLECTC, 2012, p.5). The first trial of BWCs was reported in the United Kingdom (UK) in 2005 (James and Southern, 2007), however a surge of BWC adoption occurred in the United States (U.S.) in the summer of 2014, in response to controversial police brutality incidents (Malm and White, 2020; St. Louis et al., 2019). Many of these U.S. BWC pilot projects were implemented in the hopes of enhancing police legitimacy (Ariel et al., 2015). Police legitimacy refers to the measure of citizens' willingness to obey and respect officer authority, their confidence in police, and how positive their perceptions of policing are (Tyler and Wakslak, 2004). Despite the hype surrounding BWCs and its potential for improving police transparency, accountability and effectiveness, research on the technology and its impact on policing is still in its infancy. Such hype has led police services to adopt the technology in a low information environment (Lum et al., 2019).

Yet, for police services to engage in meaningful organizational change requires an evidence-based policing approach. Evidence-based policing or 'policy police research tradition' seeks to, "alter policing policies and practices, getting the police to adopt policies and practice for which evidence exists that they work, abandoning those that do not, and subjecting all of what it does to research-based evaluation," (Bradley and Nixon, 2009, p. 423). Since the 1970's, policing has evolved from the three-R's ("random patrol, rapid response, and reactive investigation,") (Sherman, 2013, p.2) toward a direction of evidence-based policing: "targeting, testing, and tracking," (*ibid*). Evidence-based policing can be described as, "a method of making

decisions about ‘what works’ in policing: which practices and strategies accomplish police missions most cost-effectively,” (Sherman, 2013, p.1). To date, there is still much unknown about the impact of BWCs.

Existing research on police technology has illustrated how new technologies, such as crime mapping and risk assessment tools, have been adopted and used in line with traditional policing practices that place the greatest emphasis on fighting crime using experiential knowledge rather than science (Lum et al., 2015; Manning, 2008; Meehan, 2000; Sanders and Condon, 2017). This research has illustrated how technology is socially constructed in the sense that a piece of technology – such as a BWC – “is interpreted and understood through social groups (e.g., platoons, departments, services) who are influenced by a range of physical, social, political and organizational factors that may change over space and time” (Sanders and Lavoie, in press). Chan (2003) argues that police officers’ ‘technological frame’ - described as the assumptions, expectations and information used to understand technology in their organization (Orlikowski and Gash, 1994) - shapes how they make sense of, value and use a piece of technology. Technological frames, she argues, can be different depending on what position or role officers hold within the organization (Chan, 2003). In other words, how an officer feels about BWCs will be impacted by her role as an officer using the technology. Thus, understanding officers’ perceptions and experiences with the technology are invaluable for understanding how the technology is taken up and used in practice, and, by extension, how its use is perceived to impact work practices, cultures and wellbeing.

To date, research available on BWCs has focused on the impact that the technology has on criminal investigations and law enforcement, officer and citizen behaviour, and, officer attitudes and citizen/community attitudes towards BWCs (Lum et al., 2019). Lum et al.’s (2019)

comprehensive review of empirical BWC research highlights that officer perceptions towards BWCs have been the most highly researched area of BWC studies. However, limited literature exists that solely focuses on patrol-level officers' perceptions on BWCs as opposed to various employees in a police service (Gaub et al., 2016; Goetschel and Peha, 2017; Gramagila and Phillips, 2017; Jennings et al., 2014; Kyle and White, 2017; Lawshe et al., 2019; Pelfrey and Keener, 2018).

A number of Canadian police services have invested in BWC pilot projects, such as Victoria, BC, Amherstburg, ON, Calgary, AB, Edmonton, AB, Montreal, QC, Toronto, ON, Hamilton, ON, Vancouver, BC and Thunder Bay, ON (Amherstburg Police Service, 2016; Bud, 2016; Calgary Police Service, 2015; Edmonton Police Service, 2015; Montreal Police Service, 2019; Thunder Bay Police Service, 2019; Toronto Police Service, 2016; Victoria Police Department, 2010). Much of the research conducted on Canadian use of BWCs has focused on the impact the technology has on reducing public complaints and use-of-force incidents, enhancing public trust, making officers more transparent and accountable, and exploring the evidentiary value of BWC footage. Missing from this research, however, is an analysis of the impact the technology has, or is perceived to have, on officer stress and well-being, "despite evidence suggesting negative effects of electronic performance monitoring on employee well-being" (Adams and Mastracci, 2019, p. 5). While the Toronto Police Service evaluation explores the impact BWCs have on the physical health of officers, such as the impact of BWCs on pacemakers (Toronto Police Service, 2016), significantly less attention has been given to Canadian officers' perceptions of the impact of the technology on their occupational stress and wellbeing.

The present study addresses this gap in knowledge and contributes to evidence based policing research in Canada by employing an organizational justice theoretical framework (Greenburg, 1987) and technological frames analysis to qualitatively study how Canadian police officers from one mid-size service perceive BWCs to impact their occupational tasks, and more importantly, their organizational stress and well-being. Below is a brief outline of the chapters that make up this thesis.

## Thesis Outline

Chapter Two: Literature Review. Chapter two provides a detailed discussion of the available research on officers' perceptions of BWCs and the technology's perceived impact on occupational tasks and organizational stress.

Chapter Three: Organizational Justice Framework. This chapter gives a synopsis of organizational justice theory which plays an integral part in understanding how officers' perceptions of organizational justice within their service, impact their perceptions of stress when introduced to organizational change such as the implementation of BWCs.

Chapter Four: Research Methodology, outlines the data collection and research methods used in this study to understand officers' perceptions of how BWCs impact their work and their organizational stress.

Chapter Five: Body-Worn Cameras Through Officers' Technological Frames draws upon science and technology theorizing, specifically 'technological frames' (Orlikowski and Gash, 1994), to understand officers' perceptions of BWCs, and how these perceptions shape the *in-situ* use of the technology. The chapter concludes by discussing the importance of understanding officers' technological frames for the effective integration and use of new technology in policing.

Chapter Six: Body-Worn Cameras and Organizational Justice uses organizational justice theorizing to understand how officers make sense of the impact BWCs have on their work and their organizational stress and wellbeing. The analysis illustrates how officers' experiences with BWCs are perceived as 'organizational injustices' (Greenburg, 1987) which can lead to increased stress for police officers.

Chapter Seven: This chapter summarizes the main contributions of this thesis: an understanding of how officers' technological frames inform their perceptions of BWCs impact

on their occupational tasks, and secondly, demonstrating how officers perceive BWCs as a form of organizational injustice which exacerbates stress in officers. It then provides insight into research limitations and suggests direction for future research.

# Chapter Two: Literature Review

## History of BWC Technology

Police brutality incidents, such as the fatal shootings of Freddie Gray (2015), Eric Garner (2014), Michael Brown (2014), Laquan McDonald (2014), and Tamir Rice (2014) , have damaged police-public relations in the United States, incited calls to defund the police, and raised serious questions about police legitimacy across America and sparked outrage across North America (Huff et al., 2018; Kyle and White, 2017; Lum et al., 2019; St. Louis et al., 2019). It is important to highlight the recent deaths of George Floyd (2020), Breonna Taylor (2020), Dreasjon Reed (2020), and Ahmaud Arbery (2020) and the aftermaths of these incidents as indicators of the tenuous nature of police-community relations. BWC technology is relevant to police agencies because of the legitimacy crisis police are currently facing. The 'legitimacy crisis' refers to a significant decrease in public trust toward officers, particularly among minority populations (Lawshe et al., 2019; Todak, 2017). Communities are supportive of police adoption of BWCs because they perceive BWCs to make officers more accountable for their actions and decrease the likelihood of police brutality incidents occurring (Sousa et al., 2017). As such, it is believed that BWCs will help shape future police practices by keeping officers equipped with the appropriate tools to manage police-public relations and enhance police legitimacy (Ariel et al., 2015; Lum et al., 2019; Maskaly et al., 2017; Tanner and Meyer, 2015).

Influenced by the police legitimacy crisis and aware of UK research on the impact of BWCs on public confidence, U.S. studies on BWCs began to grow in the mid 2010s. Lum et al. (2019) published a systematic review of 70 existing empirical research articles, sorted into six areas: impact of BWCs on officer behaviour, as measured by public complaints and use of force reports; officers attitudes about BWCs; citizen behaviour towards officers with BWCs; citizen and community attitudes about the impact BWCs have on policing; criminal investigations

impacted by BWCs; and, finally, how BWCs impact police organizations in regard to their impact on organizational structures and existing police practices.

In what follows, I review the literature on officers' perceptions of BWCs, BWCS and police organizations, Canadian officers' perceptions of BWCs, and BWCs and their relation to organizational stress.

## Body-Worn Camera Research

### *Officers' Perceptions of the Technology*

Studies focused on officers' perceptions of BWCs are comprised of peer-reviewed academic studies, police service evaluations, and doctoral dissertations. Of the research available on officer perceptions, it has been argued that officers are more likely to have positive attitudes towards BWCs after they have used the technology (Ellis et al., 2015; Fouche, 2014; Gaub et al., 2018; Grossmith et al., 2015; Jennings et al., 2014; Jennings et al., 2015; Koen, 2016; McLean et al., 2015; Smykla et al., 2015; Toronto Police Service, 2016; White et al., 2018b). BWCs have also been described as a tool to provide police with protection against public complaints (Fouche, 2014; Goetschel and Peha, 2017; Koen, 2016; McLean et al., 2015; Owens and Finn, 2018).

Research regarding how officers perceive BWCs to effect their behaviour is mixed, with some research reporting that officers perceive BWCs to improve their behaviour or performance during work (Edmonton Police Service, 2015; Gramaglia and Phillips, 2017; Jennings et al., 2014; Jennings et al., 2015; Makin, 2016; McLean et al., 2015; Tankebe and Ariel, 2016; White et al., 2018b), while other studies detail officers' skepticism that any possible change in their behaviour is due to BWCs. For example, Pelfrey and Keener (2016) found officers to be skeptical of their behaviour changing before the camera and Headley et al. (2017) found officers were skeptical of any change after using BWCs. The last notable benefit present in current

literature is officers' perceptions of BWCs as a tool to enhance evidence collection. For example, officers have indicated BWC footage allows them to write better reports and provide evidence to clear up more cases than before implementation of the technology (Gaub et al., 2018; Goodall, 2007; Katz et al., 2014; Jennings et al., 2015; Pelfrey and Keener, 2016; White et al., 2018b).

A common theme in many of the studies on officer perceptions is officers' concern of losing their discretion while using BWCs (Edmonton Police Service, 2015; Gramaglia and Phillips, 2017; Grossmith et al., 2015; Guerin et al., 2016; Headley et al., 2017; Koen 2016; Makin, 2016; Toronto Police Service, 2016; White et al., 2018a). Newell and Greidanus' (2018) study focused on officer attitudes about how much discretion officers should have when it comes to operating BWCs and they found most officers agreed on some level of discretion being permitted with a minority supporting a 'cameras rolling non-stop with no discretion' approach. Officers also reported that the presence of BWCs made them feel like they could not behave as they were used to. For example, Koen (2016) reveals officers from his study said they felt more legalistic and found themselves issuing more traffic tickets and second guessing themselves on the job.

Another common concern present in the literature is the technical difficulty of BWCs and their impact on workload and process, as some individuals reported time wasted on footage download and increasing time on report writing (Katz et al., 2014). Numerous studies found officers feared that BWCs would result in disciplinary action and that footage captured would be used against them (Edmonton Police Service, 2015; McLean et al., 2015; Newell and Greidenus, 2018). When comparing officer perceptions of pre- and post- use of BWCs, the popular opinion amongst officers' post-use resulted in a more positive perception of the cameras. Although officers' perceptions of BWCs seemed to improve with use, officers also became more skeptical

about the impact BWCs have on citizens attitudes and behaviours in their community (Gaub et al., 2016; Headley et al., 2017; White et al., 2018a).

### *BWCs and Police Organizations*

While there is a large body of research available on officer perceptions of BWCs, less is known on the impact of BWCs on police organizations (Lum et al., 2019). Lum et al. (2019) argue that empirical research on police technologies demonstrate that, "technologies often have unintended consequences on police organizations and may not deliver on their expectations," as such, a better understanding of the impact of BWCs on the organization of policing is needed (Lum et al., 2019, p. 18). However, a few notable studies do exist that explore the impact BWCs have on the organization of policing. For example, Phelps et al.'s (2018) analysis of the impact of BWCs on police training found that while there is little difference in police training with or without BWCs, officers using BWCs were more likely to identify mistakes in their practices during training. Lum et al. (2019) argue that further research needs to be done that focuses on law enforcement organizations practices and training protocol and the impact BWCs may have on these practices. Officer perceptions of BWCs are arguably related to workplace behaviour, as officers make up police organizations. Focusing on officers solely, will also reveal a better understanding of the inner workings of a police agency.

### *Effects of BWCs on Police Organizations in Canadian Research*

Canadian police services have started to invest in pilot projects to test the effects of BWCs. Though the literature on Canadian services is limited, it is growing. Published evaluations have been released from Thunder Bay Police Service (TBPS) who's study occurred during 2019, Edmonton Police Service (EPS) who's study commenced in 2011 – 2014, Toronto Police Service (TPS) who's study began in 2014, Montreal Police Service (SPVM) who's pilot

launched in 2016, and the Victoria Police Department (VPD) in Victoria, BC in 2009. Although the VPD pilot project lasted a short four months in comparison to other Canadian pilot projects, it did offer insights on officers' perceived benefits of BWCs, such as enhanced evidence collection and situational awareness. More recently, EPS, TPS, SPVM and TBPS have produced more thorough evaluations of BWCs with larger samples and longer pilot projects. Canadian pilot projects have sought to evaluate the impact of BWCs on transparency and the accountability of their officers, community and officers' attitudes, reducing hostile situations, and enhancing evidence collection and investigations (Edmonton Police Service, 2015; Montreal Police Service, 2019; Thunder Bay Police Service, 2019; Toronto Police Service, 2016). The following section will review the main findings of the Canadian BWC evaluations.

### *Officer Perceptions of BWCs in Canadian Research*

The main objectives of Canadian studies shared similar goals of increasing transparency, officer accountability, public trust and confidence, evidence collection, and officer and community safety (Edmonton Police Service, 2015; Montreal Police Service, 2019; Thunder Bay Police Service, 2019; Toronto Police Service, 2016). Most Canadian pilot project evaluations demonstrate officer support for BWCs (Edmonton Police Service, 2015; Thunder Bay Police Service, 2019; Toronto Police Service, 2016), with the exception of the SPVM (2019). As aimed for in their objectives, most services reported positive feedback from officers in regard to BWCs positive impact on citizen interactions, and protection against misconduct allegations. Officers who were skeptical about BWC technology became more positive about BWCs after having used the technology (Toronto Police Service, 2016).

Officers across Canadian services shared concerns over the technological function of BWCs (Edmonton Police Service; 2015; Thunder Bay Police Service, 2019; Toronto Police

Service, 2016), as well as concerns regarding privacy issues (Montreal Police Service, 2019), increased administrative responsibilities (Toronto Police Service, 2016), and the cost of BWC technology (Edmonton Police Service, 2015; Toronto Police Service, 2016). The SPVM officers expressed strong negative feelings towards BWC technology. Montreal members felt that BWCs took away their discretionary power, depersonalized their interactions with the public and made them feel like their service has a lack of trust in them (Montreal Police Service, 2019). Ultimately, the Canadian services, except for Toronto Police Services, that conducted pilot projects did not adopt BWC technology, citing the financial cost of the technology as a barrier, with the exception of SPVM, who cited cost, as well as privacy concerns and officers' strong dislike of the cameras (CBC, 2019).

It is important to highlight that the police service reports discussed above are general evaluations of the technology without a particular focus. Meaning that the studies did not have a specific research question or focus, rather they evaluated BWCs in a broad sense pertaining to their value. Absent from these Canadian evaluations, as well as from the broader research on BWCs, is the perceived impact these technologies have on members' organizational stress.

## Stress Literature

### *Operationalization of the Concept of Stress in Policing*

In order to understand the impact of the stress that arises from BWCs in policing, one should have an understanding of the pre-existing stressors that police face. This section highlights what police experience as stress without BWCs. Policing has been recognized as a profession prone to stress because of the expectation of performance from community members and management (McCarty et al., 2019). Stress unique to the police profession is identified as occupational stress. Police officers are expected to perform to a higher standard than the average civilian and this expectation can take a toll on officers' "emotional, physical, and mental well-

being," (McCarty et al., 2019, p.2). It is important to note that the effects of occupational stress are sometimes intensified due to the pressures and constraints of the unique nature of policing, which contribute to organizational stress (Liberman et al., 2002). For example, organizational stress can be felt after an uncommon, high-stress call where officer actions are questioned or scrutinized. However, other aspects of policing where officers feel organizational stress include departmental policies and procedures, supervisory frustration, promotional processes, and shift work (Bishopp et al., 2018). Schaible and Grecas (2010) note that the emotional labour of being an officer is another factor that makes policing unique in nature from other occupations. While police officers experience stress from everyday tasks and duties, it is the larger organizational aspects of policing, such as supervisory frustration, and unfair policies or procedures that impact organizational stress in officers.

### *General Overview of Stressors in Policing*

Dowler (2005), for example, argues that stress caused by, "poor wages, excessive paperwork, bureaucracy, insufficient training, inadequate equipment, shift work, weekend duty, limited promotional opportunities, lack of administrative support, and poor relationships with supervisors or colleagues," may have damaging effects on officers' performance and well-being (p.477). One side effect of workplace stress is 'burnout', which is a condition that is triggered by prolonged exposure to stress that outweighs the coping methods available to them (McCarty et al., 2019). Individuals who succumb to the effects of burnout are more likely to develop anxiety disorders, depressive disorders and alcohol dependence (McCarty et al., 2019). Schaible and Gecas (2010), argue that police officers experience burnout differently than other professions because they are required to constantly shift their emotions to adjust to the situation at hand (see also Dowler, 2005; McCarty et al., 2019).

### *Connections to BWCs as a Stressor in Policing*

While much of the research on BWCs has not looked explicitly on the impact BWCs have on organizational stress, the negative aspects of BWC use, such as increased workload, insufficient training, and a lack of administrative support, would suggest that BWC use would impact organizational stress (Adams and Mastracci, 2019; Katz et al., 2014; McLean et al., 2015; Newell and Greidenus, 2018). Adams and Mastracci (2019) fear that officer use of BWCs may magnify officer burnout as officers try to maintain their accountability to the public, and cope with constant surveillance and changes to their administrative duties. In their research, they emphasize that officers' perceptions of organizational support can moderate burnout potentially caused by BWCs. Trinkner et al. (2016) reveal that poor productivity may be a result of high levels of distress. Their findings would suggest that stress impacts how officers work. The way in which officers perceive BWCs to impact their occupational stress is significant as an officer's ability to use and cope with the technology can influence effective BWC implementation (Gaub et al., 2016; Gramagila and Phillips, 2017; Lawshe et al., 2019).

A less prominent concern seen in current BWC literature is the apprehension of officers when engaging in dark humour otherwise known as 'gallows humour'. Gallows humour can be described as a coping mechanism used by first responders, specifically police officers, wherein humour is used to cope with crises or tragic situations to make the situation more tolerable for those involved (Pogrebin and Poole, 1988). Adams and Mastracci (2019) highlight how this important coping mechanism may not be available to officers when BWCs are being used. The humour that officers may engage in may not be appropriate for the general public to hear as they may take words out of context and not be able to relate to gallows humour. Not being able to use this coping mechanism may have an impact on officers' stress and overall health (Adams and

Mastracci, 2019). Officers who use gallows humour may be viewed as losing their composure which affects how the public perceives officer demeanor (Adams and Mastracci, 2019).

### Leiter and Maslach's Areas of Work Life

Officer stress may be perceived by the general public as caused by the nature of police work, however, studies inviting officers to discuss the key stressors that affect them at work tend to identify their police department as a main source of stress (Trinkner et al., 2016). McCarty et al. (2019) draw upon Leiter and Maslach's (2004) typology of 'areas of work-life' to identify organizational stressors for police officers. The six areas susceptible for producing stress, as identified by Leiter and Maslach (2004), include: workload, control, rewards, community, feelings of fairness, and sense of values. *Workload* can create stress when the demands of the job exceed the officer's limits, or when the expected workload exceeds the amount of time provided to complete it in. *Control* refers to officers' perceptions of their autonomy, access to resources in their department, and input in decision-making processes (Leiter and Maslach, 2004). Thus, when an officer feels they are unable to exercise their discretion or have a voice in decision-making procedures, they may feel stressed. *Rewards* refer to social or monetary rewards that may shape officer conduct (Leiter and Maslach, 2004). For example, if officers feel that they are being paid a fair amount for the work they do, or feel they are more likely to be promoted, they may feel less stressed. *Community* refers to whether officers feel supported by their co-workers and superiors and do not feel conflict between citizens, co-workers, superiors or the service (Leiter and Maslach, 2004). *Feelings of fairness* refer to whether officers feel they are being treated with respect, that the service enforces discipline fairly. And lastly *sense of values* refers to the way an employee's job expectations meet the reality of their work (Leiter and Maslach, 2004).

Leiter and Maslach's (2004) typology of 'areas of work-life' is applicable to officer perceptions of organizational justice (defined in the following chapter) within policing. The connection between officer stress and officers' perceptions of organizational justice is due to the similarities in the types of triggers that aggravate organizational injustice and stress for officers. The following chapter will outline organizational justice theory, provide a detailed description of the three main constructs (distributive, procedural and interactional), and talk about police studies that use the theoretical framework of organizational justice to understand officer perceptions of BWCs.

# Chapter Three: Theoretical Framework

## Organizational Justice Theory

I draw on organizational justice theory to conceptualize officer understandings of BWCs in relation to organizational stress. Organizational justice theory offers an explanation of perceptions of fairness in the workplace (Colquitt et al., 2001) and has been used to explain perceptions of fairness in police agencies (Bradford et al., 2014; Haas et al., 2015; Kyle and White, 2017; Myhill and Bradford, 2013). The following section will expand on organizational justice theory, illustrate the connection between organizational justice theory and stress in the workplace, and review the existing literature that employs organizational justice theory in police studies concerning BWCs.

### Foundations of Organizational Justice Theory

Organizational justice theories focus on identifying antecedents to, and outcomes of, perceptions of fairness in organizations, such as the workplace. The theoretical approaches used to study organizational justice have evolved as the interest in organizational justice has increased. Cohen-Charash and Spector's (2001) meta-analysis of organizational justice reveals that perceptions of organizational fairness are composed of three distinct concerns: distributive, procedural, and interactional. My study uses organizational justice theory and its three constructs (distributive, procedural, and interactional [composed of interpersonal and informational]) to make sense of officers' perceptions of the impact of BWCs on their occupational tasks, and occupational and organizational stress. I chose organizational justice theory because it is inward facing, focusing on the "implications of justice judgements on staff attitudes, staff retention, workplace relations, productivity and performance," (Robert and Herrington, 2013, p.115). Other police studies that use procedural justice solely without other constructs of organizational justice theory are more concerned with the relationship between police organizations and the public

(Robert and Herrington, 2013). The organizational justice theory construct as a whole (distributive, procedural, interactional) is the most appropriate to use in the present study. Below I expand on each of the constructs of organizational justice theory.

### *Distributive Justice*

Distributive justice is concerned with the perceived fairness of outcomes (Greenburg, 1987). Persons who feel they are not receiving just outcomes may reduce their motivation and effort, while persons who feel that they are receiving just outcomes may increase their productivity (Adams, 1963). Adams' analysis of equity and fairness in the workplace looks at the discrepancies between job inputs and job outcomes, and how these discrepancies can cause negative or positive behaviours from employees. For example, if an employee felt that their job outcomes were not reflective of their input, they may reduce their effort to match the outcome they receive. Alternatively, an employee who felt that their outcome deserved a larger input, may put in more effort to match the reward they receive (Adams, 1963). An organization that displays distributive justice allocates resources fairly in accordance to the rank and position of employees (Lawshe, 2018). Examples of resources would include wages, benefits, and vacation days. When resources are not distributed fairly and employees feel an imbalance between their inputs and outcomes, organizational injustice will be felt (Colquitt et al., 2001).

### *Procedural Justice*

Procedural justice is an employee's perceived fairness in the process of reaching outcomes (Leventhal, 1980; Thibaut and Walker, 1975). Procedural justice is present when employees perceive the process of arriving at an outcome as fair and just (Greenburg, 1987, 1990; Lambert and Hogan, 2013; Wolfe and Piquero, 2011). Procedural justice research has been heavily situated in legal settings but is also relevant to nonlegal settings. Thibaut and Walker's

(1975) research on procedural justice operationalized the construct in courtroom settings, "where the fairness of the verdict and the process that led to the verdict are often independent" (Colquitt, 2001, p.388). Leventhal and his associates applied procedural justice in nonlegal settings, situating the processes that one may experience to six procedural rules. If the rules were followed, the procedure was considered just. Studies such as Cohen-Charash and Spector (2001), Myhill and Bradford (2013), Strivastava (2009), and Tyler (1994) use Leventhal's six rules, while others such as Lambert and Hogan (2013), and Wolfe and Piquero (2011) use Lind and Tyler's four feature conceptualization of procedural justice.

Leventhal (1980) suggested six rules (the consistency rule, the bias-suppression rule, the accuracy rule, the correctability rule, the representativeness rule, and the ethicality rule) to apply during procedures to enhance the likelihood that a process would result in a fair outcome (Cohen-Charash and Spector, 2001). These rules, coupled with the procedural justice concept of voice (input during the process of decision-making), underscored an *instrumental* rationale driving decision-recipients attention to procedures (Folger, 1977; Lind and Tyler, 1988). The instrumental rationale highlights voice as a means to control outcomes by having a say in the decision-making process, thus leading to the perception that the production of favourable outcomes is more likely (Lind et al., 1990). Lind et al. (1990) extended the use of procedural justice from Leventhal's (1980) legal procedures to an organizational context. When later findings did not support the instrumental importance placed on voice, Lind et al. (1990) presented the group-value model of procedural justice to explain the non-instrumental (or relational) effect of voice. The group-value model argues that the voice effect, "stems from the implication that those accorded an opportunity to present information are valued, full-fledged members of the group enacting the procedure," (Lind et al., 1990, p. 952). Lind et al. (1990)

contend that non-instrumental procedural features (specifically, trustworthy authorities, neutral procedures, and respectful treatment) are important to assessments of the fairness of processes.

### *Interactional Justice*

Interactional justice is often viewed as an extension of procedural justice (Cohen-Charash and Spector, 2001; Cropanzano and Greenburg, 1997) and refers to how employees are treated on an interpersonal level when procedures are implemented. This lens focuses on the *behaviour* exhibited by management toward the decision-recipient (Cohen-Charash and Spector, 2001). The interactional justice framework suggests that an employee who has become a victim of injustice would react negatively toward his or her supervisor/manager rather than the organization. Colquitt et al. (2001) add that interactional justice consists of two types of interpersonal treatment: *interpersonal justice* and *informational justice*. These two constructs are analyzed by Greenburg (1990) who labels interpersonal justice as the quality of treatment (politeness, dignity, and respect) by those implementing procedures. While the second construct, informational justice, involves the explanations behind the procedures used and why outcomes were distributed a certain way. Miscommunication and inconsistency with directives highlight injustice through the informational construct of organizational justice. Trinkner et al. (2016) reported that officers perceive, "favoritism, policies inconsistently applied, [and] rules not followed – as a primary source of stress," (p.161).

In contemporary police studies, some scholars apply the procedural justice construct as inclusive of interactional justice (De Angelis and Kupchik, 2007; Haas et al., 2015; Trinkner et al., 2016), while others recognize interactional justice as an independent construct (Myhill and Bradford, 2013; Wolfe and Piquero, 2011). For the purpose of this research, I will be treating interactional justice as distinct from procedural justice.

## Organizational Justice and Stress within Policing

Researchers have drawn on organizational justice theorizing to illustrate the relationship between perceptions of organizational justice and stress (McCarty and Skogan, 2013; McCarty et al., 2019; Zhao et al., 2002). Police stress literature recognizes organizational injustice as a key stressor for officers (Kyle and White, 2017; McCarty et al., 2019; McCarty and Skogan, 2013; Noblet et al., 2009; Trinkner et al., 2016; Violanti and Aron, 1995; Zhao et al., 2002). Studies have identified organizational stressors for officers such as perceptions of unfair policies (Kyle and White, 2017; McCarty and Skogan, 2013; Zhao et al., 2002), poor communication and inadequate support from supervisors (McCarty and Skogan, 2013; Noblet et al., 2009; Trinkner et al., 2016; Violanti and Aron, 1995), a lack of involvement in decision-making processes (Trinkner et al., 2016; Violanti and Aron, 1995; Zhao et al., 2002), and unfair discipline (Violanti and Aron, 1995). Although the various studies operationalized organizational justice in different ways, they all share the commonality of officer stress being impacted by perceived injustice in their workplace.

## Conclusion

As demonstrated above, organizational justice plays an essential role in promoting favourable outcomes for police organizations. Robert and Herrington's (2013) meta-analysis of organizational justice and policing literature shows organizational justice within policing garners greater cooperation of staff members, positive attitudes toward members of the public, and a positive evaluation of policing. Organizational justice literature has highlighted the importance of police organizations building a strong rapport with their officers to ensure organizational justice is upheld. When there is organizational injustice, employees are less likely to respect organizational values or adapt to organizational changes. If an organization has practices in place

to uphold organizational justice for their employees, their employees are more likely to internalize the organization's values, and accept change promoted by the organization (Trinker et al., 2016; Tyler, 2011). Now that I have presented the literature review and theoretical framework that inform this thesis, the next chapter provides a detailed description of the methodology used in the collection and analysis of the data.

# Chapter Four: Research Methodology

In this chapter, I begin with a discussion of constructivist grounded theorizing (Charmaz, 2014) which informed my data collection. I then describe my data collection and analysis process.

## Constructivist Grounded Theory

This research follows a constructivist grounded theory approach (Charmaz, 2014). Constructivist grounded theory is built off of Glaser and Strauss' (1967) grounded theory, known by qualitative researchers for its flexibility and legitimacy (Charmaz, 2014). Glaser and Strauss (1967) proposed that qualitative analysis had its own logic and could generate theory. Grounded theory argues that when researchers enter the research field as a '*tabula rasa'* – blank slate – the data collected is also capable of theory generation.

Grounded theory is a positivist-objectivist approach that produces, "a single reality that a passive, neutral observer discovers through value-free inquiry," (Charmaz, 2008, p.401). In research, objectivists can study subjectivity (values, beliefs, and attitudes) however, they will do so objectively. Contrarily, subjectivists will construct their understanding of data through their values, beliefs, and attitudes (Gray, 2013). Rather than assume that theory emerges from data, constructivist grounded theory assumes that researchers construct theory from data. Constructivist grounded theory draws upon the inductive, comparative, and open-ended elements of Glaser and Strauss' (1967) grounded theory. However, as opposed to using grounded theory strategies to be an objective, neutral, or detached observer, the constructivist approach emphasizes engaging subjectivity. Using a constructivist grounded theory approach involves taking, "the researcher's position, privileges, perspective, and interactions into account as an inherent part of the research reality," (Charmaz, 2014, p.13). For example, my study is a

reflection of my pre-existing knowledge on BWCs, organizational justice theory, technological frames, my values, and my understanding of BWCs taken from my interactions with the officers in my study. This approach requires that the researcher maintain the central focus for theory generation on the data, while being reflexive and accountable to their pre-existing knowledge.

As a researcher, for example, I recognize my perspective and privilege of knowledge on BWCs and policing. After completing my undergraduate degree in Sociology and Criminal Justice and Public Policy, I pursued graduate studies due to my passion and interest in policing. My interpretation of police work stems from studying policing throughout my undergraduate degree, where I gained an appreciation for police work. I entered my graduate studies with an interest in policing and the impact of organizational practices on female officers. My interest in BWC research was sparked by my supervisor who invited me to work as a research assistant on a study that quantitatively explored officers' perceptions of BWCs. Through this project, I immersed myself in the existing literature on BWCs and policing, as well as on the theoretical literature of organizational justice and technological frames. Therefore, my thesis project has been informed by my understanding of the existing research on BWCs and the theoretical framework of organizational justice. While I placed the words and experiences of my participants at the foreground of my analysis, I was also reflexive and analytically attentive to pre-existing theoretical concepts, such as procedural justice, distributive justice, interactional justice, and technological frames, for informing my final analysis.

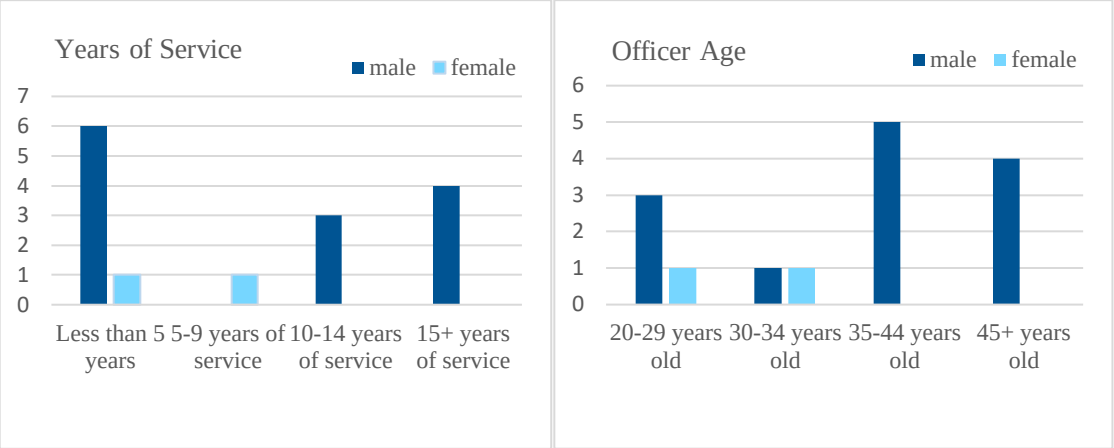
## Study Design and Procedure

My data collection involved semi-structured interviews with fifteen police officers within a mid-size police service in the Greater Toronto Area. The police service is comprised of approximately 900 uniformed police officers dispersed amongst 20 platoons across the Service's

divisions. Our data was collected from interviews with one division (approximately 40 officers) in April and May of 2019. We received ethical approval from both Wilfrid Laurier University and Lakehead University. Officers were invited to participate in our study through their service. Upon meeting members, we presented them with an informed consent sheet (Appendix C) that outlined the objectives of the study, perceived risks and benefits of participating and processes for maintaining confidentiality and anonymity. Following the interviews we distributed thank you forms (Appendix D) that provided officers with our contact information should they have any questions or concerns about their interview or involvement in the study.

Data collection consisted of 41 interviews in total. My sample consisted of 15 interviews with a variety of personnel ranging from constables (n=12), Acting Sergeants (n=1), and Sergeants (n=2). There was also one officer who is in the Criminal Investigations Branch (CIB) unit, included in my sample. I began by randomly selecting 15 interviews to ensure I had a diverse selection of participants. To select my sample population, I used a random number generator on random.org to generate a sequence of the numbers 1 – 41. I then chose the first 15 numbers that the website auto-populated and labeled these participant numbers as my sample. My sample consisted of 13 male officers and 2 female officers. Officer age ranged from 24 to 57, with an average age of 38. Officers years of service ranged from 1 – 30 years of service, with an average of 10 years of service. Figure 1 shows officer age and years of service in more detail.

*Figure 1: Officer Demographics*




The two female officers were younger (30 and under) and had less experience (10 years or less) than their male counterparts. Male officers ranged from their early twenties to late fifties in age and had a wide range of experience from 1 to 30 years.

## Interview process

As a research assistant, I shadowed my research supervisors during the intensive interviews – taking research notes and asking follow-up questions where possible. Intensive interviewing is described by Charmaz (2014) as a method of interviewing that, "focuses the topic while providing the interactive space and time to enable the research participant's views and insights to emerge," (p.85). Intensive interviewing complements a constructivist grounded theory approach as it encourages a specific direction of focus or topic with an open-ended inquiry. Once I became comfortable in the research setting, I conducted four of the fifteen interviews with officers. All interviews were digitally recorded and transcribed verbatim.

The interview guide was developed by my research supervisors and consisted of open-ended questions that asked broadly about officers' perceptions of BWCs. The interview guide explored officers' perceptions of: BWCs functionality, how BWC technology impacted performance of occupational tasks, BWC policy and directives, BWCs impact on accountability

and transparency, benefits and challenges of BWCs, and feelings towards whether BWCs should become a permanent tool (Appendix E).

During interviews, I engaged in memo writing. Memo writing involves taking informal analytic notes that prompts researchers to analyze their data and codes before writing a formal draft (Charmaz, 2014). For example, a passage from one of my journals described an officer interview as the following:

> *Supervisor:*
> *Mentionable quote "well, I have nothing to hide, accountable outside this room and inside this room"*
> *Defensive/protective over service? – concerned that other officers may be telling us that this interview is mandatory, and he says that officers are excited to be involved.*
> *Positive about cameras – likes the transparency and accountability*
> *Mentions "this stays here" before telling us about other officers' feelings about BWCs – this seems to be contradictory to statements made at the beginning of the interview about having nothing to hide*
> ****Outlook on BWCs maybe depends on officer's perception of what police work is?*
> *This interview is making me think of officers' perceptions of organizational justice****
> *Officers' perceptions of BWCs may be affected by how they feel about their police service*

The note above, "this interview is making me think of officers' perceptions of organizational justice," demonstrates my initial insight of officers' perceptions of BWCs being influenced by their perception of organizational justice. This later translated into my decision to use organizational justice theory as my theoretical framework.

During my memo writing process, I began to rethink and reconceptualise my research questions to concentrate more specifically on officer practices. For example, during the interviews, it became evident that the impact BWCs had on officers' everyday tasks may contribute to their stress. After submersing myself in policing literature on stress and technology

in policing and reflecting on the interview data, I revised my research questions to better fit the interview data collected. My revised questions became:

(1) How do officers perceive BWCs to impact their occupational tasks?

(2) How do officers perceive BWCs in relation to organizational stress?

For the purposes of my research and coding processes, I focused on areas that address officer stress and well-being, or those areas where officers spoke about their stress and well-being without being prompted by a 'stress' specific interview question.

### Initial Coding

After establishing my sample of participants and completing the transcription process, I began to read through the transcribed interviews. Initial coding can be described as forming, "the link between collecting data and developing an emergent theory to understand and account for these data," (Charmaz, 2014, p.343). This is where I engaged in 'line-by-line' (*ibid*) or incident-to-incident coding for my first three interview transcripts. I jotted down the most common and prominent codes such as: wasting time or too much time, provides protection, discretion concern, being watched, evidence value and fear of discipline. I then took my initial codes and began to focus code, where I tested these codes and applied them to the remainder of my transcripts.

### Focused Coding and Analytic Memo-writing

Focused coding can be described as a process wherein researchers, "concentrate on the most frequent and/or significant codes among their initial codes and test these codes against large batches of data," (Charmaz, 2014, p. 343). I began to identify and set parameters of what findings aligned with my initial codes. After I applied my focused codes to my entire dataset, I wrote out a running list of my themes to help me better understand the main themes in my data (Appendix A). My most common codes were evidential value, discretion concern, diminishing

officer relations, provides protection, time, fear of discipline, administrative burden, enhances officer job performance, policy/directive issues, impaired/domestics, control of technology, trust in organization, and court value.

### Axial Coding

After reviewing my focused codes and identifying the most prominent recurring themes, I moved on to axial coding. During my axial coding phase, I began to draw comparisons between my focused codes and start to make sense of the different categories/themes that existed within and among my codes. I identified my main themes as: time, evidential value, being watched/monitored, trust, and mental health. I found that these themes captured the most important data in relation to my broader research questions.

### Concept Mapping

After establishing these larger themes within my dataset, I used concept mapping to conceptualize and theorize how my codes work together to answer my research questions (Charmaz, 2014). This step allowed me to theorize and draw from my memo-writing to help me visualize and understand what my codes were revealing. To start, I wrote down my first research question in the middle of a blank page and began to connect the main themes that I felt would answer this question. From here, I branched off of my main codes to show the codes closely related as I had previously completed in my axial coding phase. Appendix B demonstrates how I connected my focused codes to my main codes/themes to help answer my research question: How do officers perceive BWCs to impact their occupational tasks? I repeated these steps for my second research question. Concept mapping was an important step in analyzing the data because I was able to visualize the connections from my analytic memos and axial coding together to answer my research question.

## Chapter Five: Body-Worn Cameras Through Officers' Technological Frames

### Introduction

This chapter answers my first research question, 'how do officers perceive BWCs to impact their occupational tasks?' To answer this question, I use Orlikowski and Gash's (1994) 'technological frame' theoretical concept. Technological frames are cognitive structures that refer to the "assumptions, expectations, and knowledge used to understand technology in organizations," (Orlikowski and Gash, 1994, p.178). Chan (2003) argues that police officers 'make sense' of technology through their 'technological frames' which are informed by officers' assumptions and expectations, as well as by the training and organizational directive delivered by their service, and their experience with using the technology (Chan, 2003). Different social actors within a police service, she argues, can interpret and adopt technology in different ways, and their members' use can change over time (Chan, 2003).

Orlikowski and Gash identify three domains that make up an individual's technological frame: *nature of technology, technology strategy* and *technology in use.* 'Nature of technology' refers to users' interpretations of the technology and their understanding of its functionality and capabilities. Employees who have different interpretations of the nature of a technology, would frame its capabilities in different ways. 'Technology strategy' refers to users' understandings of why their organization decided to implement the technology. It is concerned with the motivation or reason behind implementation and the value that the organization places on the technology. Lastly, 'technology in use' refers to users' understandings of the technology's functionality on a day-to-day basis. This domain focuses on how employees will regularly use the technology and the real or perceived implications or consequences associated with its use. While these three domains are presented as being distinct, they can, and often do, overlap and inform one another. In what follows, I draw upon these three constructs for understanding how officers make sense of

and use BWCs, and, through my analysis highlight the importance of police agencies attending to frontline officers' technological frames when implementing new technology (Chan, 2001; Lum et al., 2016).

## Nature of Technology: Evidential Value, Protection and Functionality

The first domain (nature of technology) recognizes employees' understandings of the capability of the technology. In line with existing literature on BWCs, officers perceived BWCs to provide evidential and investigative value (Gaub et al., 2018; Goodall, 2007; Katz et al. 2014; Jennings et al., 2015; Pelfrey and Keener, 2016; White et al., 2018b), as well as protection against false accusations (Fouche, 2014; Goetschel and Peha, 2019; Koen, 2016; McLean et al., 2015; Owens and Finn, 2018). While officers saw benefits associated with the use of BWCs, they did not perceive the physical design of the technology to fit well within Canadian climate or the physical nature of policing. Further, officers perceived the physical object, and its placement on their uniform, as negatively impacting their occupational tasks. It is important to note that there is overlap in explanations between officers understandings of BWC use and how they perceive the technology to impact their everyday tasks. The following sections will highlight officers' perceptions of the evidential and investigative value BWCs provide, while also highlighting the dysfunctionality of BWCs physical limitations.

### *Evidential and Investigative Value*

Though officer perceptions of BWCs were mixed, one feature that officers agree on is the evidential value that BWCs bring to policing. Several officers praised the technology for capturing evidence in an advanced way. One officer expressed that, "the number one benefit is...[that] what I see through my eyes and what I hear through my ears is being recorded," (P26). The ability of BWCs to capture enhanced evidence was perceived by officers to improve both

their investigations and report writing. In fact, officers talked about how they used BWCs in different ways to enhance their evidence gathering and investigations. In the following two quotes officers discuss the unique ways they adopted and used the technology to enhance their work:

> … you can basically narrate what you're doing, and that way should you get, like should your investigation go further, everything's articulated, versus people saying, "oh you had no grounds to do that, or you didn't know that at the time", but meanwhile you play the video and you can use it to your advantage to narrate through why you're stopping that car or searching that person or whatever (P33)

> …it does certainly increase the quality of evidence, especially with traffic stops or if I were to you know, sit at a stop sign or something like that, I've taken my BWC off and I've just put it you know, in front of the stop sign or whatever and conduct the enforcement that way, so that they can still see it (P32)

As demonstrated above, the first officer uses the video as a way to capture his articulation and rationalization of his work processes – it provided him with a means to document his accountability practices and, by extension, enhance his transparency in court. For the second officer, he used 'innovation-reinvention' (Willis et al., 2018) by removing the camera from his chest and placing it in ways that allowed him to capture street violations on camera. In this way, both officers have appropriated the technology in ways that align with, and enhance, frontline policing practices. Almost all participants perceived BWCs to enhance report writing by enabling officers to review footage and, thereby, write more accurate and detailed reports.

While officers saw value in BWCs for enhancing report writing, there were caveats and concerns associated with the ability of officers to actually have the time to review footage and for an overreliance on the footage for report writing. Officers talked about their understanding of the capabilities of BWCs with mention to how BWCs are used in their everyday tasks. The aforementioned is an example of overlap between the different domains of technological frames

('nature of technology' and 'technology in use'). Many officers, for example, discussed how the demands of frontline policing did not provide the time to review videos. As one officer explains,

> It would be nice to give it a review, but we don't have the time to do that. Nobody does, we're so busy that we don't have time to sit and watch these again when it comes to report writing. Some people want to sit and watch their videos. We don't have time for that (P1)

While officers noted the challenges of reviewing video during shifts, they also highlighted concern with this practice, as they felt that an overreliance on video diminishes officer memory and accounts of what happened. Officers who shared this perception agreed that BWCs should be used, "to maybe validate certain things," (P18) but not to replace officer memory.

Officers also perceived great value in the technology, "especially in court" (P11). Officers perceived BWC footage to be helpful in court when defense lawyers try to question the validity of their reports. BWC footage was perceived to leave less room for defense lawyers to try to pick apart an officer's report, because the entire court room can see the events unfold as the officer did. As one officer explained,

> … in court, a lot of times you'll get the defense lawyer who's trying to make it look like yeah, I put their client in a car and I shoved a bottle of vodka down their throat and made them fall out of the car, piss drunk, kind of thing. Um, almost making me out like I picked on their client. Well, look here it is on camera, I pulled your client over just like I would pull anybody else over. I opened the door; your client fell out (P26)

Further, officers perceived BWCs to reduce the number of cases going to court because,

> They're [offenders] pleading. They're not going to trial. And the Crowns, are very sad that the project is coming to an end (laughs). They were very terrified of the project at the start and now they're sad that it's going away (P11)

With less cases going to court, officers also found BWCs to reduce the amount of time they spend in court, "because people are just pleading when they see the video," (P33). Although BWCs offer value to court processes, a common concern for officers was the use of BWC footage in court. Officers feared that the footage opened up a new line of inquiry by allowing

lawyers to "start drilling you on the BWC, you know. How was my client standing?" (P1). As such, officers expressed concerns over the new work demands and time associated with preparing for court in light of the use of BWC footage.

### *BWCs and Protection*

The video footage gathered by BWCs was also perceived to protect officers against false accusations made by the public. As one officer explains,

> Again, I think it goes back to the court. The best evidence, um I mean I do see it addressing complaints against officers, you know, when someone says, 'oh that officer was rude to me'. You know, x, y, and z. You know a supervisor, or somebody can just bring up that video and be like, 'you know what, no this officer was being as patient as they could possibly be with you and you were just a handful' (P32)

As described by the officer above, the presence of the BWC footage made him feel more confident because his interactions with the public were recorded if a citizen were to ever file a complaint. This was particularly true when officers discussed transporting offenders:

> I think a lot of complaints that we get is you know, 'the officer said this to me in the cruiser, the officer did this in the cruiser, or you know, he punched me when I was in the back seat handcuffed or whatever', right? You know what, go ahead. It hasn't been turned off since I've had a dealing with you, I've transported you to the hospital or to the jail cell or whatever. Go ahead, watch it cause if what you're saying is true, I've got nothing to hide. That's the one thing I've really liked about it, is that being in a car by yourself with someone in the back, either handcuffed or not handcuffed, apprehended or taken to the hospital or whatever, I've got nothing to hide… (P1)

As described above, the officer perceived the camera as protecting him against false accusations. When discussing the protection provided by the BWC footage, some officers noted that the camera helped to reduce their stress because they, "know that someone can't make something up about what I said because it's all on video," (P11).

While many officers feel a loss of control in regard to operating the BWCs, other officers expressed feeling a sense of control with having BWCs as a tool. This perception stems from

officers feeling as though they have lost control in situations with the public. Officers perceive BWCs to give them control with citizens who may pull out a cellphone to record an interaction with the police. Officers feel that having their own recording device gives them control back:

> And like when people are like, well I'm recording, well I am too, right? So, anyone that's putting a cellphone camera in your face, like I'm making my own video, right? (P36)

### *Functionality of BWCs*

In this service, BWCs are chest mounted and this physical location was perceived as being incompatible to Canadian weather as well as the physicality associated with the job. For example, officers vented about the inconvenience of wearing BWCs in winter weather:

> So, for us, it's Canada so the weather changes in an instant. If I put a jacket on, my camera is now covered and obstructed and I'm going to put my own comfort and safety above the camera so, I'll put my jacket on and then you just get the audio because it's going to be covered (P33)

As demonstrated in the quote above, there is concern over the constant changing of clothing for officers due to the nature of their job. They may be required to move among buildings, vehicles, and outdoors for long periods of time.

Another issue that officers talked about was the poor quality of the mounts that hold the BWCs. One officer revealed that, "every physical confrontation that I have been involved with this camera. It always falls off," (P14). Even though there are two options of mounts for officers to choose from, they claim both lack structural integrity to hold BWCs securely. This impacts the footage captured by BWCs when officers get into altercations because the camera is likely to fall off.

Members' interpretations of BWCs frame the technology to be useful to officers in terms of evidential value, administrative value, investigative value and providing protection for officers, however they also reveal the dysfunctional nature of BWCs in their everyday practices.

More specifically, many perceived BWCs to be a burden to wear. Thus, while officers may recognize the value of BWCs capability and functionality, if these functions do not support their everyday practices officers may not use them as intended by their service.

## Technology Strategy: Unclear Directives, Risk Management and Organizational Surveillance

Orlikowski and Gash (1994) explain that a user's technological frame is shaped by their perception of the 'technology strategy' which refers to their understanding of the rationale and motivation around the implementation of the technology. The police service in this evaluation published the purpose or 'strategy' for the BWC pilot project. In a report released in 2018, the service stated, "the purpose of the project is to determine if the cameras provide value to the community in four areas: accuracy and quality of evidence; transparency and trust with the community; enhanced accountability; and Service effectiveness" (2018). However, what was very clear in the analysis is that the dominant narrative expressed among participants was different from that of the Service. Unlike the Service, who perceived BWCs to have "value for the community", the frontline officers perceived the technology to be implemented as a way to monitor and survey officers behaviour. The lack of clear messaging and administrative directive left officers frustrated and questioning the value of the technology. Further, officers perceived the directive as unclear which led some officers to perceive the technology as a tool for institutional risk management and organizational surveillance rather than one that was to be useful to frontline officers.

### *Institutional Risk Management*

When discussing the implementation of the BWC pilot project, many officers discussed how they believed the organization adopted the pilot project in response to political and external pressures. As one officer explains,

> the world is moving, there's cameras everywhere. And we need, I think we need to move with that. Because if we don't do that, then it's gonna be the questioning out there of why you guys are not doing that. That's it, we're just *appeasing those voices from the political aspect I mean* (P14)

Some officers believed the service had adopted the pilot project as a way to project an image of the service as progressive and advanced. For example, the following officer believed that BWCs were being implemented because of police organizations wanting to protect their image.

> But it's a way to get in with them, you know what I'm saying? Can't do that on camera, no way, right? Cover your ass. That's all they worry about, they don't care about this connection that you have with people, it's just for that upper management (P16)

This officer feels that the purpose of BWCs is to protect the Service's image. Officers are under the impression that BWCs are a way for upper management to ensure the institution is protected by BWC footage.

Others also perceived the integration of the pilot project as being a response to broader political pressures for increased police transparency and accountability. Officers felt that BWCs were implemented in Canada in response to the legitimacy crisis in the U.S. and as a means to please a small percentage of the community who called for increased transparency. One officer's response captured this perception well:

> And you see in the States, they immediately release the video for one reason or another, whether it's public pressure or to show something nice and fluffy. Who knows? (P33)

### *Organizational Surveillance*

Officers expressed concern about BWCs being used to 'police' the police. As one officer explains, the strategy of implementing BWCs was to surveil officers.

> Initially, they were implemented basically on, it's kind of like a big brother watching officers' interaction with the public because of the times we live in now. Where everybody wants to kind of beat up on the cops … and accuse us of bad behaviour or discrimination or whatever else. I think that was, I think, the same

> thing with, I mean it obviously started in the U.S. with the officer involved shootings (P26)

The response above highlights how officers perceive the camera to be an illustration of the Service's distrust of their work.

Other officers believed that BWC footage would be used to discipline officers. This is a commonly held perception amongst officers in various agencies as published in previous literature (Edmonton Police Service, 2015; McLean et al., 2015; Newell and Greidenus, 2018). When asked what they believed to be the reason for BWC adoption in their service, an officer replied:

> For discipline. Yeah, upper level. For sure, right? Always want to see what their officers are doing, just silly (P16)

Officers believe their superiors want to use BWC footage to discipline them. This belief may be supported through officers not understanding the use of BWCs because of inconsistent and mixed-messaging from their service. As the following officer explains,

> And they say, "hey you know," right before we started the project they said, "we're not gonna use this as a disciplinary tool, don't worry," and then like two months into the project we got a little letter saying, "hey FYI, we may use this as a disciplinary tool if certain actions don't change or whatever" and you're like (laughs) like we all knew, we see it coming but it's not good because it's just, there's no consistent messaging and we don't trust anyone in that room either (P33)

### *Perceptions of Unclear Directive and Policy during Implementation*

The police agency framed the specific purpose of the BWC pilot project as 'value to the community'. This messaging reinforces to officers that BWCs are not primarily designed for their benefits or needs. The policy delivered to officers addressed the expectations of BWC users, data retention timelines, and disclosure procedures. As revealed by officers, they found the policy given from their service unclear and inconsistent.

Officers have mixed perceptions concerning the Service's adoption of BWCs, many were left wondering, "like what's the purpose of it?" (P1). For example, officers were confused as to the strategy behind having BWCs operating in certain situations. In particular, one officer's response captured their confusion with the relevance of the technology:

> And I think that's the frustration with most people is, why do I need to have it on when I'm out waving cars through an intersection. Like what's the purpose of it? I think that's where a lot of people get frustrated with it (P1)

As shown above, the officer did not understand the strategies associated with having BWCs on when there was no evidence to capture during an interaction with civilians.

When asked about the coherence of the BWC policy, officers common response was that, "it's easy enough to wrap your head around," (P32). However, when officers talked about their confidence in turning BWCs on and off, they often talked about being confused. While some officers expressed that they wanted the ability to use their discretion when deciding to turn it on and off, other officers expressed concern with discretionary use. Officers appeared to understand that developing a BWC policy will be challenging because of the subjective nature of police work. For example, one officer explained, "...I mean it's hard to say exactly what you would like to see for this policy because I think that a lot of the times, there's different scenarios, different circumstances that might inform us and we really can't inform on every single incident that you're going to encounter," (P32). Some officers feel that a policy is necessary, however, if that policy restricts their control and does not allow them to exhibit discretion then it will not be perceived as useful.

Officer confusion over when they were allowed to turn the camera on / off was exacerbated by the changing policy provided by the BWC administrators. As the following officer explains:

> Uh you just, they try, they've told us like seven different things over the project. So, there's no clear message from them so, it's whenever you want really. Like, whenever you feel your investigative involvement has concluded. But they've told us, I can't even remember, how many different things cause' at one point they were trying just to generate more video footage, like in quantity and that, when they sent that message out, to me it, I'm like, 'this is a joke now,' like you just made the whole project into a joke and I'm an advocate for the camera. Like, I like the camera so, when they were saying that kind of stuff, I'm like, 'now you're fluffing it' (P33)

The response above is an important insight as it shows how the perceived lack of clear organizational messaging negatively impacts organizational change as it creates differing perceptions and understandings regarding the purpose of the integration of the technology. Differing perceptions or 'technological frames' regarding the technology strategy is recognised as incongruent frames (Chan, 2001). As Chan (2001) explains, it is important to consider officers' technological frames when implementing new technology because incongruent frames can create tension in the agency and lead officers to resist technology or use it in ways it was not intended when officers have to adjust their practices to fit the perceived everchanging direction given by their service.

### Technology in Practice and the Consequences of its Use: Administrative Burden, Loss of Discretion and Work Morale

The third domain 'technology in use' (Orlikowski and Gash, 1994) refers to how employees understand the use of technology and what consequences or conditions are associated with its use. Officer responses in the following section demonstrate how BWCs negatively impact their occupational tasks through using the technology. A focus was placed on how BWCs negatively impact their occupational tasks due to officer responses highlighting how perceived consequences outweighed perceived benefits. This section focuses on officers' negative

characterizations of BWCs, specifically: causing administrative burden, a loss of discretion and autonomy, and diminishing work relationships and morale.

### *Administrative Burden*

Similar to previous research on BWC use, officers perceived the technology as creating an administrative burden (Edmonton Police Service, 2015; Katz et al., 2014; Makin, 2016; Toronto Police Service, 2016). Specifically, officers perceived BWCs as adding time onto their already busy workday by extending time spent on reports – especially on calls related to domestic assault and impaired driving. Using BWCs required officers to fill out new reports associated with BWC technology. Officers expressed concerns that the additional BWC reports were redundant when completing them alongside their other reports.

When asked about how BWCs impact their everyday tasks, officers responded that BWCs increase, "the length of time taken for each call," (P12), due to the necessity to, "be more precise...in the information that you give," (P31). Officers complained that, "it's so time consuming," (P19) and gave sarcastic comments saying, "it's perfectly fine. Now I just wasted two hours of my time," (P16). Officers framed the time commitment associated with BWC use in two contradictory ways. One group recognized the administrative work associated with BWC use but saw value in the technology regardless of the time added. As one officer explains,

> And so, a lot of cases it's great to have the video to say for sure when you ask this question or what exactly the answer was verbatim but the time it takes to sit and get all that, to put it into your text page um, is quite time consuming (P19)

While, another group of officers, such as the one below, identified the increased administrative work as being a waste of time and redundant:

> So, it's an exact, it's a duplication of work but through different systems. So, it takes us even longer. So, it's just redundancies (P33)

This officer believed that the duplication of work caused by BWCs, and specifically from reviewing BWC footage for report writing, makes tasks take longer to complete. Those officers that perceived BWC reports to be a 'waste of their time' and 'redundant' argued that, "we don't need police officers transcribing things … That's a clerical … I don't see that as being a good use of it [time]" (P32). The time spent reviewing footage for report writing was perceived to take them away from 'real' police work. The following response demonstrates the resistance felt by officers:

> And you can make time but like, like I said, I've only been doing this for like a year and a half, I want to be out there working. I don't want to be sitting in here watching videos (P19)

This officer wants to be 'out there' meaning that they want to be doing what they believe to be 'real' police work. Officers perceived the administrative aspects of using BWCs to diminish their idea of 'real' police work. Members acknowledgment of BWCs negatively impacting their idea of what 'real' police work is provides evidence that some officers' ideas of what police work should look like is informed by a traditional frontline policing model (Manning, 2008). BWCs may not fit into officers' traditional policing lens because they deviate from the norms that officers are used to.

Officers also perceived BWCs to increase the administrative work and time required to respond to impaired driving and domestic assaults. As impaired driving and domestic assaults go to trial, officers felt that they needed to operate differently and with extra care to ensure that each step was made 100% accurately according to their handbook. They also felt that they needed to take the extra time to review the BWC footage to ensure their reports were accurate.

> When there's charges and for like, um specifically impaireds or domestics. Impaireds especially, because a lot of them go to court and you have to be specific on obviously what you're saying. Cause' if it's not on the camera, then it didn't happen and whatever and so, I find with impaireds, especially, you are pausing,

> rewinding, um, numerous times throughout your report and it almost takes twice as long for you to do your report with an impaired or even like a domestic. I had a domestic, last block and it was about a two and a half hour domestic and there were charges. And it took me probably four hours from start to finish, to do the entire report (P12)

As the officer above explains, report writing for domestic and impaired cases is seen as taking longer to complete because of the number of times he needs to review the footage to write a perfect report.

### *Police Discretion and Autonomy*

Officers expressed concern that they are not able to use their discretion and autonomy when using the technology. Loss of discretion and control associated with BWC use have been broached by officers in other studies (Edmonton Police Service, 2015; Gramaglia and Phillips, 2017; Grossmith et al., 2015; Guerin et al., 2016; Headley et al., 2017; Koen, 2016; Makin, 2016; Toronto Police Service, 2016; White et al., 2018b). Research on police technology argues that in order to integrate police technology effectively, officers' experiential police knowledge needs to be recognized by police administrators and stakeholders. Experiential knowledge refers to officer background knowledge that comes from an officer's on-the-job experiences (Baluucci et al., 2017; Smith and Greene, 2015). Similar to experiential knowledge, 'craft' is known as on-the-job knowledge that sets members apart from society in terms of skills possessed that can only be learned by experience (Wilson, 1968). BWCs pose a threat to officers' craft as their experiential knowledge, skill and judgement may not be compatible with BWC protocol. For example, officers' discretion may be diminished because officers believe that they are unable to give citizens warnings because their BWC captures conversation, and there is evidence that an offence took place. Officers who are pre-conditioned to the traditional police culture (Manning, 2008), may resist BWCs because the technology poses a threat to their discretion. Officers

struggling with a loss of discretion when using BWCs is also a common finding in police technology research (Baluucci et al., 2017; Smith and Greene, 2015), as officers feel their 'experiential knowledge' is diminished by new technology. Yet, officers' technological frames prioritize experiential knowledge and when technologies are perceived to diminish the value of experiential knowledge, it can lead officers to resist the technology, or to use it in ways that the designers and service did not intend.

Discretion was identified as the, "biggest challenge," (P25) for members. While some officers felt that their discretion was limited, others felt that their discretion had been taken away altogether. One officer made this clear when they stated that, "they say that we still have discretion. But I don't think we do," (P16). At least for some officers, there are calls where their discretion is, "kind of thrown out the window," (P12). It is a common perception amongst officers that there are particular calls where they feel their BWC limits their humanity because they are under surveillance. The sensation of omnipresent monitoring associated with BWCs creates a challenge for officers as they encounter situations with citizens where they wish to be sympathetic and understanding but feel they are unable to do so on camera. For example, an officer described interactions with families where they would struggle with exercising their discretion with their BWCs on:

> There's families, there's people you know, suffering from job loss and can't pay their mortgages, can't feed their kids, you know. There's so many different factors, that you have to take into account, but it's not in the book like that. It's like okay, he stole this food, charges. Why did he steal the food? Steal it to feed his family? To feed his kids? Is he hungry? Lost his job? Bad marital life? I don't know, right. So, you gotta take that stuff into factor but you can't be transparent. Because on the camera when they say something, you're like, okay now I gotta charge you (P16)

Officers feel that they are unable to give warnings or let people off the hook if they have their BWCs on. Using discretion is a form of experiential knowledge and officers 'craft'. When police

technology impedes an officer from using their discretion or 'craft' they can become resistant to the technological change.

Further, officers felt that the technology constrained their ability to build rapport by making them more 'robotic' in their interactions with community members. As the following officer explains,

> So, if I'm dealing with a 15-year-old, high school kid, that thinks he's, you know, a gang guy. I'm going to communicate with him differently than I'm gonna communicate with the businessman, you know. Who just had a fraud committed against him. I'm gonna treat them both differently. So, I feel that now *I'm restricted on my communication*, specifically with that 15-year-old. I don't want to talk to him like I talk to the 45-year-old businessman. So, it kind of feels like that's kind of restraining (P18)

This feeling of restriction was not an uncommon experience for officers. As another officer explains,

> … there's a language that they understand and sometimes you have to talk to them in that language. This would prevent me from doing that, right? (P31)

Officers feel as though BWCs do not allow them to police as they used to, which can make officers resistant to technological change.

Since officers perceive the BWC as limiting their discretion, some officers have learned to get past their fear of getting in trouble and use the BWC to their advantage:

> [I]nitially, I thought it kind of chipped away at our discretion because I felt I had to be so by the book on everything, whereas so much of policing and what I love about it is, it's up to me. Right? It's up to your discretion, how you want to handle a certain situation and you typically have a lot of leeway. Um, but initially with the camera I tried to be so by the book that no one could question anything and then again, overtime I realized I don't really care, I'm gonna do it my way and here's the video and then it just works because you also learn which videos they watch and which videos they don't watch. So, again, you play the system (P33)

Officers expressed their struggle with BWCs as the technology hindered their autonomy as an officer. Having the ability to make their own decisions, is what officers claim to love about their

job. Having their experiential knowledge diminished by BWCs can influence officers to resist the technology.

### *Work Relationships and Morale*

A common perception held by officers after using BWCs was the negative impact BWCs had on co-worker relations and organizational morale. Some officers felt that their relationships with each other were negatively impacted by BWCs, because "it's changed the way we speak to each other," (P18). For example, officers within the same shift, both wearing BWCs, expressed feeling uncomfortable and feeling that they could not express themselves as they used to. The interviews suggest that this is mainly due to fear of personal information being recorded or getting in trouble for saying something personal that may be taken out of context. The response below captures the frustration felt by officers due to the impact of BWCs on their relations:

> [W]e worked with each other for twelve hours a day, our lives are still going. We know about each other's lives. So, if I want to talk to them about, 'hey man, what's going on', this and that and we have a few seconds to do it... yeah, that's the time I'm gonna ask about personal stuff. But now, there's cameras, right? So, you can't anymore and they're like, 'oh, well the call should be the call', you know. That's stupid, we're still normal human beings. …so it's totally different (P16)

Officers also expressed that their co-workers from other shifts who did not wear BWCs, were wary to interact with them on shift. In fact, one went so far as to claim, "they avoid us like the plague" (P14), while another explained, they "want nothing to do with us," (P16).

Officers felt that BWCs diminished their relationships with other coworkers as they were unable to joke around on calls like before, which is described by some officers as, "trying to just take care of each other's mental health, through dark humour or whatever," (P33). The use of humour, or dark humour, is referred to as 'gallows humour' (Adams and Mastracci, 2019). Officers may use gallows humour with other officers to help cope from sensitive or stressful

calls. Officers recognize their coping strategies may be taken out of context by members of the public:

> Obviously, there's different circumstances and situations in which like, there's no need for the black humour and it's just outright inappropriate but there are other times where it is a stressful situation in which yeah, you do use a little bit of black humour to kind of get over the hump but yeah no, I do see that as being potentially a challenge because we kind of realized to ourselves, you know what we need to be professional when we're on these things (P32)

Officers' morale and mental well-being is negatively impacted when officers are unable to express themselves by using black humour or other coping methods that they do not wish to have recorded on BWCs (Adams and Mastracci, 2019).

A few officers perceived BWCs to have diminished the comradery that was in their department:

> And uh it removes a lot of the comradery in the call, like at the calls that you would see otherwise. Because there's some calls like a sudden death where there's a dead body but once everybody's gone it's just you and the dead body and like another officer and usually you would either have a personal conversation or joke, not necessarily about the situation but just, you're just talking (P33)

Not being able to use dark humour amongst officers is a condition that comes with using BWCs. Officers feel that they, "tend to decipher stress and things and ways that some people may not understand," (P26). Thus, BWCs expose officers' coping strategies and makes them vulnerable to scrutiny.

The dynamic of officer relationships was also impacted by the use of BWCs as it removes their privacy. The response below captures the discomfort officers express in having a personal conversation at work:

> It's you know, you're in a cruiser with somebody for let's say 12-hours, but really you throw in lunch, all that kind of stuff, say 9-hours you're in a cruiser with somebody. And you're talking about everything under the sun. And if you forgot to turn that thing off (laughs) everybody now knows about everything that's going on in your life. Like you know, one of the guys on my shift is one of my best

> friends. We talk about everything and if this is on, some of the things we talk about are very private. And we don't need people to know about these things (P1)

Fear of talking about personal topics at work is worrisome for officers because it negatively impacts their relationships at work. Officers do not wish to have their personal conversations recorded. One officer expressed their fear over checking their personal cellphone while on shift if their family called them:

> Then that way you're not thinking like, even like something as silly as, and I'm sure this will come up at some point but, with where it's at, I take my phone out like you can see. Your family or pictures. In pretty good detail, like, there's a picture of, my background's my son, right? You can see that right on the camera, which is kind of concerning, you know? (P19)

Officers feel that having BWCs impacts their willingness to talk to others because they do not want their private conversations and personal information recorded. Officers wish to have more control over when they are required to have their BWC on, as this would help keep their sensitive information private.

## Discussion

In this chapter, I sought to answer the research question: How do officers perceive BWCs to impact their occupational tasks? While most officers perceive positive outcomes of BWCs for the evidential and investigative value they provide, there was significant concerns from officers on the negative impact of BWCs. Specifically, officers perceive BWCs to negatively impact their occupational tasks as they diminish their autonomy and negatively impact the 'craft' of policing.

Officer interpretations of technology are key to understanding "technological development, use, and change in organizations," (Orlikowski and Gash, 1994, p.174). Officer interpretations within this study showed that officers recognized the value of BWCs, however the perceived value seemed to be overshadowed by the consequences of using BWCs and lack of

support for their organization's BWC strategy. Most officers did not understand the relevance or need for BWCs and felt that their service had adopted them for disciplinary measures.

Since the success of most police technologies is measured by their effectiveness within the organization (Chan, 2001; Lum et al., 2016), it is vital to understand why technology is not being used effectively. When officers can fit the use of BWCs into their technological frame – such as perceiving BWCs to provide them with protection or enhancing their evidence and investigative practices – they are more favourable toward the technology. However, when BWCs are perceived by officers to diminish important elements of their technological frame – such as experiential knowledge and the craft of policing – the technology is resisted and viewed negatively. These findings suggest that officers' technological frames impact whether they accept or reject BWCs.

Throughout this chapter, officer responses demonstrated how their technological frames were informed by a traditional frontline policing model (Manning, 2008). Technological frames that are influenced by the reactive nature of policing are structured on the basis of, "traditional strategies and tactics," (Manning, 2008, p.251). As illustrated in my analysis, these traditional expectations are causing conflict with BWC integration. This conflict is a result of officers perceiving BWCs to create administrative burden and to not support officers' experiential knowledge.

Police technology scholars, such as Smith and Greene (2015), recognize officers' experiential knowledge only goes so far for officers' comprehension. New technology requires sound policy and procedure to aid and influence officers' experiential knowledge. The challenge for police administrators is to gain an understanding of frontline officers' perceptions of BWCs use and purpose (technological frames), and realign their technological frame with the agency's

intentions for BWCs (i.e., purpose and ideal use). When officers do not feel that BWCs are aiding them in their daily tasks, they may start to use the technology in ways that better suit their needs. Willis et al. (2018) recognize this alteration to technology use as 'innovation re-invention'. Officers use of BWCs reflected innovation re-invention when they claimed to use BWCs to 'play the system' to their advantage (P33). This is an important finding as it highlights the importance of recognizing officer experience and input when implementing new technology.

Existing research on BWCs has found that officers' perceptions of BWCs become more positive after having used the technology in practice (Ellis et al., 2015; Fouche, 2014; Gaub et al., 2018; Grossmith et al., 2015; Jennings et al., 2014; Jennings et al., 2015; Koen, 2016; McLean et al., 2015; Smykla et al., 2015; Toronto Police Service, 2016; White et al., 2018b). For the present study, officers noted being more receptive toward the technology after having used it for a year, but still expressed *substantial* concerns with the technology. These findings beg for further exploration to better understand how length of time of use impacts officers' perceptions of technology. Regardless, this study does demonstrate how officers' technological frames are not static, but instead can shift over time, as officers did express more favourable perceptions of the technology after having used it. These more favourable perceptions appeared to be connected to officers' abilities to engage in innovation re-invention. For example, one officer took her BWC off her chest mount and placed it on her vehicle's dashboard in order to capture traffic violations (P14). This reinvention of the technology enhanced her evidence and investigative capabilities, which in turn made her more receptive and positive toward the technology.

Lastly, this chapter has highlighted the negative implications of poorly communicated and unclear organizational directives when implementing new technology. Inconsistent messaging led officers to question the purpose or strategy of the technology. Technical design

requires developing insight about officers' frames and anticipating outcomes based on these frames (Lum et al., 2016). Aligning officers' technological frames is important in order to encourage officers to use the technology as intended. The present analysis identifies a critical disconnect for officers with BWC technology because they perceived the changing organizational directives and lack of clear messaging to mean that the technology was not *for* them, but was instead a tool the organization could use *on* them to surveil and discipline them.

# Chapter Six: BWCs and Organizational Justice

## Introduction

Having looked at the way officers make sense of and use BWCs, the present chapter explores how officers perceive BWCs to impact their organizational stress and well-being. Drawing on organizational justice theory, with specific attention to the theoretical constructs of distributive justice (fairness of outcomes), procedural justice (fairness of procedures) and interactional justice (the treatment of an employee during the procedure and outcome), I illustrate how officers' perceptions of, and experiences with, BWCs create organizational stressors that, if not attended to, can negatively impact the organizational health and well-being of frontline officers (see chapter three for a detailed discussion on organizational justice theory).

I begin the chapter by briefly defining the three constructs of organizational justice. I then present my findings by illustrating how officers perceive BWCs to provoke organizational injustice in their workplace through unjust outcomes, procedures and treatment. In my discussion, I situate my findings within the broader literature of organizational justice and organizational stress to provide insight into the way BWCs, and specifically the organizational management of the technology, can create additional work stressors that negatively impact officers' organizational stress and well-being.

## Organizational Justice and Organizational Stress

To begin, it is important to demonstrate the link between organizational justice and organizational stress. After reviewing literature in both areas, many similarities were noted between officers' perceptions of organizational justice and organizational stress. In fact, according to studies focused on police officer stress in the workplace, officer stress stems from perceived injustice within their organization (McCarty and Skogan, 2012; Noblet et al., 2009; Trinkner et al., 2016; Violanti and Aron, 1995; Zhao et al., 2002). Although officer stress does

come from ‘inherent’ stressors associated with the nature of policing (danger and crime), the organization has also been found to be a source of stress for officers (Noblet et al., 2009; Violanti and Aron, 1995; Zhao et al., 2002). Perceived stress within police organizations has been associated with: poor communication and lack of support from supervisors (McCarty and Skogan, 2012; Noblet et al., 2009; Trinkner et al., 2016; Violanti and Aron, 1995), a lack of involvement in decision-making processes (Trinkner et al., 2016; Violanti and Aron, 1995; Zhao et al., 2002), unfair discipline (Violanti and Aron, 1995), and perceptions of unfair policies (Kyle and White, 2017; McCarty and Skogan, 2012; Zhao et al., 2002). These stressors are also recognized as forms of injustice within organizational justice theory. If police organizations uphold organizational justice for their employees, their employees are more likely to internalize their organization’s values and accept organizational change (Trinkner et al., 2016; Tyler, 2011). Thus, one can presume officers who experience organizational justice within their police agency would be more likely to accept the organizational change, such as the implementation of BWCs. While those officers who experience injustice in their agency will be less likely to support the use of BWCs and the injustice they experience may impact their stress and well-being.

When using organizational justice theory as a lens to analyze the impact of BWCs on officer stress, it is important to emphasize Noblet et al.’s (2009) *injustice as a stressor* concept. Noblet et al.’s (2009) study was one of the first studies to analyze the injustice-as-stressor concept within a policing context. Recognizing injustice as a stressor is to acknowledge the association between perceptions of injustice and indicators of stress (Noblet et al., 2009). The concept of *injustice as a stressor* is important to this study as I argue that the implementation of BWCs and the perceived implications of the implementation are the *injustice*s that provoke stress in officers.

Having briefly reviewed the literature on organizational justice and organizational stress and well-being in police, I turn to my analysis to demonstrate how perceived injustice felt from BWC use within the police organization impacts officer stress. In what follows, I begin with briefly reviewing the concepts of distributive justice, procedural justice and interactional justice, each followed by findings pertaining to the injustices experienced by officers and how these injustices are recognized as stressors for officers. I then breakdown Leiter and Maslach's area of work life typology to provide further support for the stressors BWCs impact.

## Distributive Justice

Distributive justice is attained through perceived fairness of outcomes (Greenburg, 1987). When the input of officers matches the outcomes they receive, distributive justice is met. Effectiveness of BWCs is valuable in officers' perceptions of the technology. If BWCs produce outcomes that are desirable for officers, the use of BWCs will be perceived as fair. For example, as indicated in the previous chapter, many officers perceive BWCs to produce the outcomes they want, such as improved evidence, less time in court, and less complaints. These positive outcomes, I argue, are evidence of BWCs promoting officers' perceptions of distributive justice.

Officers, however, perceive injustice when desirable outcomes are not achieved. For example, as identified in the previous chapter, administrative burden, loss of discretion and autonomy, and negative impacts on work relationships, were evidence of distributive injustice for officers. As such, the findings show that BWCs provoke distributive injustice through ineffective outcomes such as an increase in workload without perceived benefit, and the unfair allocation of agency resources. However some officers do not experience distributive injustice associated with BWC use, their positive perceptions of outcomes are evidence of BWCs promoting organizational justice. Officer perceptions of how effective BWCs are will impact

how they perceive the outcomes. For example, one officer commented how, "if the BWC can make things easier for us, if they can make us... more efficient [and] if it's a good use of our resources, in terms of going to court and streamlining that process, then yeah. It would be a good technology to have," (P32). Effective use of BWCs leads to better outcomes for officers. The following section will demonstrate officers' ability to recognize BWCs effectiveness in their practices and whether the technology is effective in producing the desired outcomes for officers.

### *BWCs Impact on work-to-reward*

There was a divide between officers' perceptions on the impact BWCs had on their workload. Officers seemed to be divided over the cost-benefit analysis of BWCs between work and reward. For example, some officers, such as the officer below, perceive the benefits of BWCs to outweigh the costs of its use:

> Okay, so *I love the BWCs*. I'm a huge believer in them. … I think *the cameras have benefited myself*, in a lot of instances…*I've never been stressed* about; I've never been overworked about it. There are things that can happen to make it more seamless and not as cumbersome, but like I said you get into the routine and you just do it (P36)

As demonstrated above, the officer's positive perception and recognition of the desirable outcomes BWCs can produce in spite of a perceived change in workload is evidence of distributive justice playing a part in how she perceives the technology. Other officers, however, perceived the increase in workload as unfavourable and ineffective to their occupational tasks and an unfair outcome of using the technology. As one officer commented "the workload's gonna increase. All I see is negative" (P16). Such perceptions of BWCs are supported within the existing literature (Headley et al., 2017; Katz et al., 2014; White et al., 2018a).

### *Stress Through Unfair Allocation of Agency Resources*

Officers were also concerned about the extra work provoked by BWCs resulting in less officers on the road. One officer claimed,

> it's taking officers off the road for longer and we are already short, like at our minimum. We have been for a while. It affects the staffing because of the amount of stuff we have to do (P12)

For some officers, BWCs are not solely responsible for creating stress, but responsible for exacerbating existing stress for officers. Many officers talked about how they were understaffed before BWC implementation and expressed concerns that the cameras would further reduce the number of officers on the road. Specifically, officers expressed concerns about the financial costs associated with the use of the technology, and feared the costs would negatively impact the ability to hire more officers to assist at reducing the workload on the frontlines. One officer, for example, claimed that focusing on hiring new officers, "would make me feel better, it would cut down on the workload, it would cut down on the stress of the officers," (P1). As demonstrated by this officer, stress, and by extension stress relief, appears to be associated with the fair allocation of agency resources – such as investment in hiring more officers (as this officer would like) rather than spending money on BWCs.

Concerns regarding the allocation of agency resources were not only focused on hiring more patrol officers, but were also connected to broader concerns around the 'appropriate' investment in BWC technology. For example, a couple officers feared that the service would not invest the necessary amount of money to effectively integrate BWCs so they would function properly for officers:

> Not integrating [BWC technology] with our CAD (Computer Aided Dispatch) or RMS (Records Management System) or getting technology that does that, not paying for the extra things like transcription, and not going fully in on evidence.com. … what our service likes to do and maybe other services too,

> …We like to put out a sign saying 'we're the greatest' because we have BWCs. Right? But then they *hamstring their employees* because they don't have to do any f*&@in' police work. They hamstring us by not putting the full package together. That's what I'm really, really worried about (P11)

The quote above identifies concerns surrounding proper investment in the technology and technical infrastructure to ensure that the technology works efficiently and effectively for officers on the ground. As the quote shows, it is not just about investing in the cameras, but also about investing in the proper infrastructure to ensure that the cameras are interoperable and seamless with the existing technology. Further, the officer suggests that the present implementation of the cameras provides social status to the service while providing little efficiency or effectiveness for the officers on the ground. This perception is in line with existing research on police technology that argues that technology is as much a social symbol for the organization, as it is a tool to enhance frontline policing practices (see Chan, 2003; Manning, 2008). If the police service implements BWCs, officers believe the service needs to spend accordingly to equip officers with the appropriate tools, training and knowledge on best practices for its effective and efficient use. Officers do not think it is fair to *hamstring* employees with ineffective technology just to appear advanced and accountable.

This section has demonstrated how officers' perceptions of the effectiveness of technology impacts whether they deem the outcome of BWCs to be desirable. Members who articulate desirable outcomes of BWCs, such as advanced evidence collection and reduction in frivolous complaints, seem to be more likely to perceive BWC technology as fair and useful. In contrast, officers who perceive BWCs as ineffective in achieving desirable outcomes often perceived injustice in the service's decision to implement and use the technology. As Noblet et al. (2009) argue, perceived injustices, such as increased workload and unfair allocation of agency resources, can act as stressors to police.

## Procedural Justice

Procedural justice is concerned with perceived fairness of procedures within an organization (Greenburg, 1987). Officers that perceive injustice in the process and decision-making of adopting BWCs, may feel as though the implementation of BWCs is unfair because their input was not valued in the process. Not having a voice in the decision-making processes or the ability to use discretion within their agency can cause officers stress (Noblet et al., 2009; Trinkner et al., 2016; Violanti and Aron, 1995; Zhao et al., 2002).When officers have a positive perception of their police organization and feel that they are involved in decision making processes, they are predicted to have more trust in their administration, have higher rates of job satisfaction, organizational commitment and a positive view of their organization (Carless, 2005; Crow et al., 2012; De Angelis and Kupchik, 2007; Myhill and Bradford, 2013; Wolfe and Piquero, 2011). An analysis of officers' perceptions of BWC implementation identified procedural justice concerns, such as the absence of officers' voices in the decision to implement BWCs and inconsistency of organizational directives, that created additional stressors for some officers.

### *Absence of Voice in Technology Adoption and Implementation*

Officers expressed their frustration with the integration of BWCs because of a lack of officer representation in the decision-making process. Officers felt that their concerns were not considered in the BWC implementation. One officer discussed how BWC equipment was not designed to help officers working in the traffic unit capture traffic violations.

> It was really annoying that the service was that short sighted. Not to provide us with [the option of mounted cameras]. It wasn't the project's fault. The project tried to get permission, and it never happened. It was, I thought it was a failure of leadership with the organization (P11)

Above, the officer perceives the *failure of leadership* for not recognizing and being attentive to the needs of its officers. As another officer explained,

> Sometimes I feel like where people are sitting at the top of that pyramid or whatever, they kind of look down upon this job and say well, 'you shouldn't do this, you shouldn't do that'. When they forget that they... the reality being that they came from that (P32)

The officer above recognizes that past officers who have now taken on the role of police administrators may lose sight of the needs of frontline officers, and thus not be able to accurately speak to technological requirements and best practices for them. The officer responses illustrate perceptions of feeling unrepresented, and in some cases excluded, in BWC adoption and implementation. If the service had acknowledged and gathered information from officers about how a BWC would best suit their day-to-day activities, officers would feel represented in the design and organizational adoption of the technology.

While officer voice was important for the adoption and implementation of technology, it was also identified as a concern in the development of policies guiding the use of BWCs. As discussed in the previous empirical chapter (Chapter Five), officers were concerned that the policies surrounding when cameras could and could not be turned off, would inhibit their ability to use discretion, while also negating their ability to have private conversations with community members, co-workers and family. They were also concerned that without specific guidelines concerning when and for what purposes the organization could access and use BWC footage, the BWC video could be used for disciplinary purposes *against* officers. Officers who expressed such concerns did not feel that the BWC policy attended to their specific needs and concerns. As one officer explained,

> So, it all depends on how management plays it out or the policies they make. If they are going to be reviewing all of our videos to look for my minute mistakes, or policies we aren't following, it's going to destroy morale (P11)

The lack of a clear organizational policy, or of a policy that is attentive to the needs and concerns of its members, was perceived to negatively impact workplace morale. Adams and Mastracci (2019) argue that BWC-equipped officers would perceive less organizational support, and experience an increase in stress and decrease in morale, due to officer perceptions of BWCs being used as a form of 'electronic performance monitoring' (EPM). EPM is a form of surveillance over officers' behaviour and production, known to impact employee well-being, workplace culture and employee motivation (Ball, 2010; Butler, 2012; Stanton, 2000). If BWC policies are created in favour of EPM management of officers, officers stress and morale will be negatively impacted (Adams and Mastracci, 2019).

### *Inconsistency with Organizational Directives*

Officers perceived procedural injustice through inconsistent messaging from their organization. Although inconsistency with directives relates to the informational justice construct of organizational justice, it is included under procedural justice as well. Since procedural justice is concerned with the fairness of procedures, officers' perceptions of the fairness of the BWC directive is vital in the analysis of procedural injustice provoked by BWCs.

According to officers, the organizational directive, also known as the BWC policy, consistently changed throughout the pilot project which caused frustration to many members. As one officer explained, "the inconsistent messaging has been challenging for me" (P33). Officers explained that their service would require officers, "to change every two months or two weeks …" (P33). For example, one officer talked about how, "no one knew what to do, whether or not they should be recording, when to turn it on [or] when to turn it off" (P31). While another officer reflected:

> … at the beginning of the project the procedure changed a bunch of times and so you were always kind of like is it this, is it that? What are the rules? Specifically, to when you are supposed to turn it on and when you're supposed to turn it off (P29)

Not knowing or misunderstanding organizational directives is a known source of stress for officers (McCarty et al., 2019).

As discussed in the previous empirical chapter (Chapter Five), officers were concerned that the policies surrounding when to activate cameras would inhibit their ability to use discretion, and negate their ability to have private conversations with co-workers and members of the community. They were also concerned that without specific guidelines concerning when and for what purpose the organization could access and use BWC footage, the BWC video could be used for disciplinary purposes. Officers who expressed such concerns did not feel that the BWC policy attended to frontline officers' concerns and needs.

Improving communication between officers and police administrators responsible for creating policy has been found to be important for reducing officer stress at work (McCarty et al., 2019). According to McCarty et al. (2019) the more communication between the two parties (officers and administrators) in regard to building a shared direction for the police service, the less stress experienced by officers. One officer expressed concern over the poor communication between the BWC unit and front-line officers:

> Yeah, I think the training was very poor and the communication between the unit and the front lines [was] uh, incredibly poor and inconsistent, which was even worse than poor (P33)

Not having a voice in the decision-making processes on BWC technology and not being involved in drafting the BWC directive is problematic for officer acceptance of the technology. Officers are more likely to perceive procedures as fair if their input as officers is valued and they are well informed of decisions made (Kyle and White, 2017). Lack of involvement in decision-

making processes is a known cause of officer stress from existing police stress studies (Collins and Gibbs, 2003; Deschamps et al., 2003; Morash et al., 2006).

## Interactional Justice

Interactional justice is concerned with the treatment of employees (Colquitt et al., 2001). Interactional justice is shaped by interpersonal justice (the quality of treatment from those in supervisory roles) and informational justice (explanations of procedures used) (Greenburg, 1990). Although the previous section identified inconsistent messaging under procedural justice, lack of information and confusion regarding organizational procedures and directives is also recognized as contributing towards informational injustice. Research on organizational stress has also drawn links between informational injustice and organizational stressors such as unfair discipline (Violanti and Aron, 1995), and lack of support from supervisors (McCarty and Skogan, 2012; Noblet et al., 2009; Trinkner et al., 2016; Violanti and Aron, 1995). These organizational stressors, which I discuss in turn below, are interactional injustices because they are associated with the treatment of officers.

### *Officer Distrust in Police Service*

A very common finding amongst officer responses was the issue of distrust in the police organization, BWC team and supervisors. Officers perceived the implementation of BWCs to negatively impact their trust with their service. As noted in Chapter Five, one of the main concerns expressed by officers, was that BWCs were not implemented *for* the police, but instead as a tool to police the police. As one officer explained,

> …they're telling us that these aren't used for a disciplinary purpose and everyone's just waiting for it to come. No, I don't trust that so, we'll see if they're honest about that (P12)

The officer's response above illustrates the distrust this officer holds toward his supervisor, and more broadly his service. Another officer talked about how he was concerned that he would forget to turn his BWC on and look poorly to his supervisors:

> …the odd time I would turn it on, and I would think that it's on and it's not. And then I look guilty of something, afterwards right? Cause then they're like, 'well why didn't you turn it on?' and well I screwed it up. And then they're like, 'sure (sarcasm), you didn't do what you were supposed to do at the call, or you did something offside and that's why you didn't turn it on'. It's like, 'no it was a genuine accident', I thought I hit it twice and in the heat of the moment you're not really checking that, you jump out of your car and you're just like, 'OK, I think it's on' and you go deal with the thing (P29)

This officer perceived that his supervisor did not believe him when he forgot to turn on his camera, which left the officer feeling distrusted by his supervisor. The miscommunication surrounding the use of BWC video for disciplinary action negatively impacted officers' trust in their supervisors, as well as the broader service. Inconsistent messaging about policies and distrust of supervisors and the service more generally have been linked to stress in policing (McCarty and Skogan, 2012; Noblet et al., 2009; Trinkner et al., 2016; Violanti and Aron, 1995).

The presence of BWCs was also perceived to negatively impact officers' interactions and relations with their colleagues, which in turn, was seen to diminish workplace morale. For example, officers felt that the cameras made them more 'robotic' and unable to use gallows humour out of fear of having their conversations taken out of context or used by supervisors or the public to discipline them. According to Ariel et al. (2015) and Lum et al. (2015), half of the complaints police agencies receive are focused on officer demeanor. With the goal of increased accountability and promotion of police-public relations through BWC use, complaints directed at officer demeanor are not ideal for agencies. If officers are unable to use gallows humour as a way to cope with stressful situations, for fear of repercussions from public complaints and

disciplinary action from their service, officers' perceptions of trust and support from their service may diminish.

### *Unfair Discipline*

Unfair discipline has been identified as a main stressor in the literature on organizational stress in policing (Violanti and Aron, 1995). For some officers, BWCs provoke stress because they fear that they will be disciplined for indiscretions captured on camera when their supervisors review their footage. One officer recalled his colleagues wanting to record everything because "the fear of God's in them," (P1). This comment illustrates how fearful some officers were to get in trouble because of the presence of BWC footage and knowing that their footage could be used against them. The same officer described informational injustice as he explained,

> It's the stresses within the four walls of, why didn't you activate your camera? why didn't you do this? why didn't you? You're getting in shit (P1)

Officers who are unsure of when to turn on their cameras perceive informational injustice when their supervisors discipline them when they are misinformed.

Officers recognized that BWCs would catch officers who were acting inappropriately on camera and instill necessary discipline; however they did not believe that BWCs should be used to get officers in trouble for minor offences. For example, one officer highlights interpersonal justice as he explains why their colleagues complain about BWCs in regard to petty discipline:

> I would like it to not [get officers in trouble]. *I would like officers not to get in trouble for minor procedural things that are captured on video.* I know that will never happen, but I know that's a complaint of officers. I really like the BWCs but again like that's something that I'm not a big fan of, right? So, like if I say 'fuck' on video by accident in the heat of the moment and the wrong supervisor sees it that doesn't like me and says, "you know what? that's dishonourable conduct, you're going to be charged under the police services act for that". *I don't think that's fair because I'm forced to wear this*. But again, I know they're not going to change that, and I mean, *if you go up the scale obviously their going to use it to*

> *get you in trouble if you do something really offside, right*? Like [if] you hit a suspect in handcuffs or something like that, obviously they're going to get you in trouble for that and so they should (P29)

The officer above understands the value that BWCs add by being able to catch those officers who act unlawfully, however this officer does not think it is fair to be penalized for slipping up on camera for minor indiscretions such as swearing. Officers are concerned that their supervisors may not act fairly when reviewing BWC footage by penalizing them for a trivial incident.

Some officers talked about the importance of supervisors talking to officers before moving to formal discipline if supervisors had concerns about BWC footage. Officers want their supervisors to respectfully approach them to talk about BWC footage rather than using BWC footage to instantly instill discipline. Officers felt BWCs had the capability of negatively impacting relationships with supervisors if their supervisor did not act decently when reviewing footage and addressing behaviour:

> So, there is the potential for it to affect that [supervisor to officer] relationship, but you would hope that you know, whoever's watching it, whoever's looking at it, whoever's using it within our own peers, is professional enough to kind of come forward to know or talk about it, or whatever it might be (P32)

Officers perceive BWCs to be potentially problematic in their relationships with their supervisors because they do not trust that BWCs will not be used for disciplinary purposes.

## Discussion

This chapter argues that perceived organizational injustice connected to BWC adoption in police organizations trigger officer stress. The findings demonstrate how BWCs are perceived to provoke organizational injustice in various ways, which in turn creates stressors for frontline officers. Officers perceived BWCs as a tool of social status for the service – making the service appear to be transparent and accountable – and not necessarily a tool designed to make frontline officers more effective or efficient. As demonstrated above, these perceptions of undesirable

outcomes, lack of voice and trust in supervisors and the service create additional strain and stress for officers.

Leiter and Maslach's (2004) work life typology identify six areas of work life that are most susceptible to stress: fairness, workload, reward, values, control, and community. The adoption and implementation of BWCs was perceived by some officers as an organizational injustice through the three constructs of distributive justice, procedural justice, and interactional justice that share similarities with Leiter and Maslach's typology. First, the relation between distributive justice and officer stress is illustrated through the areas of workload, reward and fairness. 'Workload' creates stress for officers when the demands of the job exceed their limits. Officers perceived BWCs to increase their administrative workload – a workload that many described as already being heavy – which was perceived as an unfair outcome that creates organizational stress (Headley et al., 2017; Katz et al., 2014; White et al., 2018). 'Reward' is the extent to which rewards (monetary, social, and intrinsic) are consistent with the expectations of employees (Leiter and Maslach, 2004). Leiter and Maslach (2004) emphasize that, "insufficient reward (whether financial, institutional, or social) increases people's vulnerability to burnout," (p.97) which is a symptom of frequent stress. Officers who perceive the drawbacks of BWC to outweigh their benefits, such as officers who perceive BWCs to provide enhanced evidence but to take up too much of their time, may experience stress due to disproportion of rewards. 'Fairness' is a blend of all three organizational justice constructs. For example, distributive justice weighs the fairness of outcomes; procedural justice is concerned with the fairness of processes; and interactional justice is concerned with the treatment of employees during this process. Leiter and Maslach (2004) highlight that employees place importance on the quality of procedures and the treatment they receive during these processes. Supervisors who are perceived

as being unsupportive and unfair in their treatment of employees have been found to create stress and promote burnout amongst employees (McCarty and Skogan, 2012; Noblet et al., 2009; Trinkner et al., 2016; Violanti and Aron, 1995).

Second, drawing a link between procedural justice and officer stress can be accomplished through Leiter and Maslach's (2004) work life area of control. 'Control' is described as an employee wanting, "to have some input into the process of achieving the outcomes for which they will be held accountable," (p.96). This area of work life is a reflection of the procedural justice construct that argues that employees should have a voice in the process of outcomes to ensure fairness. Not only is this felt through not having a say in the decision to implement BWCs, but it is also demonstrated in officers' perceptions of a loss of discretion and autonomy in their day-to-day activities because of the presence of the camera. Not having a voice in decision-making processes or discretionary power and autonomy at work can cause officers stress (Noblet et al., 2009; Trinkner et al., 2016; Violanti and Aron, 1995; Zhao et al., 2002). Lastly, interactional justice can be linked to officer stress through the work life domain of community. 'Community' refers to the quality of social interaction within an organization. Developing interpersonal relationships with co-workers and supervisors allows employees to work and function at their best (Leiter and Maslach, 2004). As officers have described BWCs having a negative impact on their relationships with their co-workers, diminishing morale, and negatively impacting trust in supervisors, the domain of 'community' is applicable to officers' perceptions of the impact BWCs have on their occupational stress.

## Chapter Seven: Discussion

This thesis has provided insight into officer perceptions of BWCs in relation to how the technology is perceived to impact their everyday tasks and organizational stress and well-being. The following chapter will highlight the main contributions of this study, in particular, demonstrating:

- how officers rationalize BWC technology through their technological frames,
- how officers' technological frames impact how they perceive and use BWC technology, and
- how officers perceive BWCs to be a form of organizational injustice which exacerbates existing stress in officers.

I will then summarize the main findings in relation to existing literature on officer perceptions of BWCs, and finally, address the limitations of this study and provide direction for future research.

This study contributes to the gap in research concerned with Canadian officers' experiences with BWC technology. It identifies how officers in a mid-size service in Ontario perceive BWC technology to impact their occupational tasks, stress and well-being. This study delivers a comprehensive explanation as to why understanding officers' perceptions of new technology are important for the effective integration and use of that technology. In light of growing concerns around police use of force and police legitimacy, and recent cries to 'defund police', it is imperative that police services look to evidence-based research to inform organizational change. The present study contributes to evidence-based research in Canada by providing empirical insights into officers' perceptions of the impact BWCs have on occupational tasks and organizational stress and well-being.

## Summary of Findings

The findings of this study are similar to existing findings in studies on officer perceptions of BWCs. The officers in this study recognized the value of BWC technology through enhanced evidential value (Gaub et al., 2018, Goodall, 2007, Katz et al., 2014, Jennings et al., 2015, Pelfrey and Keener, 2016, White et al., 2018b), and perceived protection from BWC footage against false accusations (Fouche, 2014, Goetschel & Peha, 2019, Koen, 2016, McLean et al., 2015, Owens and Finn, 2018). In line with previous research, officers reported feeling more receptive to BWC technology after having used it (Ellis et al., 2015; Fouche, 2014; Gaub et al., 2018; Grossmith et al., 2015; Jennings et al., 2014; Jennings et al., 2015; Koen, 2016; McLean et al., 2015; Smykla et al., 2015; Toronto Police Service, 2016; White et al., 2018b). While officers did recognize benefits of the technology, they also identified significant concerns, including that the technology created an administrative burden (Edmonton Police Service, 2015; Katz et al., 2014; Makin, 2016; Toronto Police Service, 2016), would be used for organizational surveillance and discipline (Edmonton Police Service, 2015; McLean et al., 2015; Newell and Greidenus, 2018), and finally, diminished officer discretion and autonomy (Baluucci et al., 2017; Edmonton Police Service, 2015; Gramaglia and Phillips, 2017; Grossmith et al., 2015; Koen, 2016; Makin, 2016; Newell and Greidanus, 2018; Smith and Greene, 2015). Similar to other Canadian services, officers expressed concerns with the technical function of the camera (Edmonton Police Service; 2015; Thunder Bay Police Service, 2019; Toronto Police Service, 2016), as well as with the potential intrusion of privacy it poses to the public as well as the officer (Montreal Police Service, 2019). Similar to Montreal's Police Service (Montreal Police Service, 2019), officers in this study were concerned over BWCs negative impact on organizational morale and trust towards their service.

## Technological Frames and Body-Worn Cameras

Drawing on the theoretical concept of 'technological frames' (Orlikowski and Gash, 1994), the present analysis uncovered how shifting organizational directives and a lack of clear organizational messaging around the BWC pilot project, led officers to perceive the technology as a tool not necessarily for the benefit of frontline officers, but instead as a status symbol for the service and a tool for organizational risk management. This study illustrates that officers' technological frames shape how officers come to make sense of and use the technology. When officers perceived BWCs to positively impact their work through evidential value and providing them with protection, they held more favourable opinions of the technology. However, when officers perceived BWCs to undermine their experiential knowledge and 'craft' (Wilson, 1968), officers talked more negatively about the technology, and in some cases, resisted it.

Using the theoretical construct of technological frames, the studied identified how officers made sense of BWCs through a traditional frontline policing model (Manning, 2008). Using BWCs with a technological frame informed by reactive and traditional policing caused conflict for officers due to BWCs not supporting officers' experiential knowledge and autonomy, removing what officers perceive to be 'real' police work, and diminishing comradery through the negative impact on officer relationships with coworkers and inability to use gallows humour. The present analysis also illustrates how officers engaged in 'innovation re-invention' by using the technology in unintended ways (using BWCs to capture traffic infractions by placing BWC on car dashboard) (Willis et al., 2018). The present analysis contributes to the field of evidence-based policing by illustrating the importance of attending to technological frames when implementing new technologies and processes. Aligning officers' technological frames through

gaining a better understanding of officers technological frames is important in order to encourage officers to use the technology as intended (Lum et al., 2017).

### Organizational Justice & Body-Worn Cameras

Employing an organizational justice theoretical framework uncovered how officers can to perceive BWCs as an injustice. While some members found the outcomes of BWCs, such as enhanced evidence gathering and protection against frivolous complaints, as desirable, most officers contended that the cost-benefit analysis of BWCs produced more negative outcomes than positive. For example, officers perceived BWCs to create an unfair allocation of agency resources, an absence of voice in decision-making processes, and the potential for unfair discipline and distrust in their police service. Drawing on Noblet et al.'s (2009) 'injustice as a stressor' argument, I argued that the integration of BWCs can create stressors but also exacerbate existing stressors, and if not attended to, can negatively impact officers organizational stress and well-being.

Officers perceived the implementation of BWCs to be procedurally unjust because of the lack of voice in decision-making processes concerning BWC implementation and policy. 'Voice' (Lind et al., 1990) was a common concern for officers when they talked about what policies should look like surrounding BWC use. Existing research on police stress acknowledges that lack of involvement in decision-making processes negatively impacts officer stress (Collins and Gibbs, 2003; Deschamps et al., 2003; Morash et al., 2006). While officers recognized the complexity of developing a BWC policy they felt that more discretion (a form of voice) should be given to officers when using the technology.

Similar to existing research on police stress, officers perceived BWCs to promote unfair discipline and contribute to officer distrust in their service, which in turn can create and / or

exacerbate existing stressors in policing (McCarty and Skogan, 2012; Noblet et al., 2009; Trinkner et al., 2016; Violanti and Aron, 1995). The changing directives, miscommunication from supervisors and their service, and perceived unfair discipline contributed to officers' distrust in their supervisors and their service. The presence of the camera, and concern over organizational surveillance and discipline, made officers hesitant to engage in 'gallows humour' (Adams and Mastracci, 2019). Yet, gallows humour is recognized as an important coping mechanism for officers (Adams and Mastracci, 2019) that has an impact on officers' stress and overall health.

### Research Limitations and Future Directions

While the present analysis provides important empirical insights into the perceived impact of BWCs on the organizational stress and well-being of officers, the findings cannot be generalized with certainty as the sample size is small and lacks gender and race diversity. Future research informed by an intersectional approach needs to be conducted to understand how race, gender and sexuality may influence officers' perceptions and experiences with BWCs. Further, previous research on BWCs has identified younger and less experienced officers as having more favourable opinions of BWCs (Saulnier et al., 2019). This finding makes sense anecdotally, as younger officers can be assumed to be more technically inclined than older officers. However, the present study found younger officers, and more importantly officers with fewer years of service, to perceive BWCs more negatively (see Saulnier et al. 2020). Future research is needed to better understand how, and in what ways, age and years of service impacts officers' technological frames.

# Appendix

## Appendix A

### *Operationalized Code Chart*

| Code | Description of Code |
|---|---|
| Additional gear to wear | Officers express BWCs as additional burdensome, excess gear to wear. |
| Administrative burden | Officers feel that BWCs cause administrative tasks to become heavier because of extra paperwork and adding additional time to reports. |
| Authority as an officer threatened | Officers feel as though their position as an officer is losing value to the public and in court. Officers feel like their authority is threatened due to perception of officers not being trusted to do their job. They feel as though their statements don't hold validity anymore. |
| Being accountable | Officers feel as though BWCs promote accountability amongst officers because officers are aware they are being filmed. |
| Being monitored/watched | Officers dislike that BWCs allow for their actions to be watched and monitored by a third party. |
| BWC unit issues | Officers express an issue with the BWC team/unit and how they interact with officers. They also express concern over the BWC unit's duties. |
| Cautious | Officers feel that they need to watch what they say and do on camera even if they feel they are a good officer, they are still cautious of what they say and how they react because of the BWCs. |
| Changing perception with use | Depicts officers who express more positive opinions of BWCs after using the technology. |
| Citizen privacy | Officers are concerned about the privacy of citizens when using BWCs. |
| Contradictory Statement | When officers made a statement and then contradicted themselves after. |
| Control of technology | Officers express that they want to be able to control when BWCs are on and off and decide for themselves situationally, how to use the BWCs. |
| Corroboration of reports and video | Officers see the value of ensuring their reports match the footage in the video |
| Court stress | Officers feel that BWCs increase their stress while in court because of the transparency, hearing/watching themselves on video in front of other people and fearing the defense will scrutinize their police work. |
| Court value | Officers feel that BWCs enhance their court experience through evidence footage and taking the 'guess' work or uncertainty about what actually occurred |

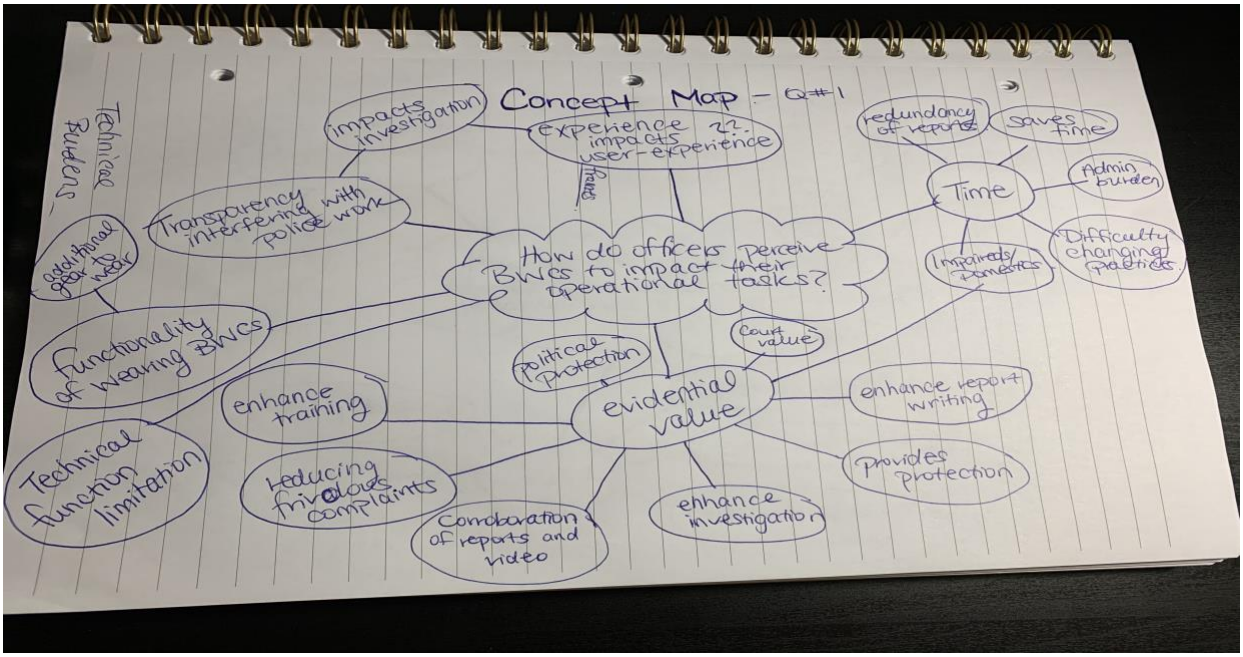
| | |
|---|---|
| Difficulty changing practices | Officers express difficulty in changing practices from how they use to operate without BWCs. |
| Diminishing officer relations | Officers feel that BWCs diminish their relationships with other officers due to them feeling they cannot talk or act how they wish. |
| Discrepancy between officer memory and BWC footage | Some officers feel that how they may remember an event may be different than what is shown in the BWC footage. |
| Discretion concern | Officers feel as though BWCs take away their discretion as an officer. |
| Enhance report writing | Officers feel that BWCs are beneficial because they allow them to write better reports with the referencing the footage. |
| Enhance investigation | Officers feel that BWCs improve investigations because of their evidence, convenience of taking statements and promoting good behaviour between officers and citizens. |
| Enhances officer job performance | Officers feel that BWCs enhance their job performance as officers because it encourages/reminds them to display appropriate, professional behaviour. |
| Enhances relations | Officers feel that BWCs support their relationships with the public. |
| Enhances training | Officers feel that BWCs can improve training practices for officers because they are able to review and watch past calls. |
| Evidential value | Officers feel that BWCs offer better evidence with footage collected. |
| Experience impacts user-experience | Officers feel that experience and age impact how they use the BWCs and how they feel about the technology in their police practice. |
| Fear of discipline | Officers fear that BWCs will get them in trouble with their supervisors and service because of an action caught on camera. |
| Fear of making a mistake on camera | Officers fear that they will make a mistake while being filmed and fear the scrutiny that may come from the footage. |
| Feeling uncomfortable | Officers feel uncomfortable because of BWC filming them or feel uncomfortable following the directive/policy of BWCs. |
| Financial concern | Officers feeling that BWCs will place a financial burden on the service. |
| Forgetting to turn BWC on/off | Officers express that they forget to turn BWCs on and off due to the unfamiliarity of using the camera and forgetting during high-stress incidents. |
| Fostering comradery | Officers perceive BWCs to foster comradery amongst their peers when they are able to review footage and laugh/joke around about an incident together |
| Functionality of wearing BWCs | Officers perceive the functionality of wearing BWCs to impact their everyday tasks. For example, taking the camera on and off due to weather conditions. Officers feel that the BWCs are not functional because of having to readjust and transfer BWCs to different uniforms (jacket to shirt). |

| | |
|---|---|
| Impacts investigation | Officers perceive BWCs to impact their investigations negatively such as, impacting the choices they make on scenes, the willingness or substance of victim/witness statements and impacting how they discuss and use confidential police tactics. |
| Impaireds/Domestics | Officers feel that BWCs impact domestic and impaired calls because they have to operate more professionally and accurately as an officer because of the nature of the call. |
| Improving citizen behaviour | Officers perceive BWCs to improve citizen behaviour due to their disposition changing once they understand they are being filmed. |
| Improving technical functionality | Officers feel that BWC technology needs to be improved to meet the needs of officers |
| Inability to use 'dark humour' | Officers feel as though they cannot use dark humour when wearing BWCs out of fear that a third party would take their words out of context or not understand the humour of police officers who use this coping mechanism |
| Mental health | Officers feel that wearing BWCs impacts their mental health because of the way they feel they need to change or act while on camera. Also, the way it diminishes their coping mechanisms as officers. |
| No impact on amplifying stress | Officers stated that BWCs have no impact on amplifying or contributing to their stress |
| No impact on reducing stress | Officers stated that BWCs have no impact on reducing their stress |
| Occupational stress | Identified by officers as the unique stress that comes from policing and how BWCs impact that stress. The stress of the profession itself. |
| Officer privacy | Officer feel that their privacy is a concern because of BWCs. |
| Officer safety | Officers feel that their safety is a concern because of BWCs. |
| Officers perspective | Officers have expressed that the video should be used as a tool for them and the footage should be viewed from their perspective |
| Organizational Stress | Officers feel that BWCs impact stress that stems from the police organization. "The stress within these 4 walls" |
| Petty discipline | Officers feel that BWCs should not be used for petty discipline as this causes officer stress. |
| Policing the police: big brother | Officers perceive BWCs purpose to be policing them and the service acting like big brother. Monitoring them to keep them in check. |
| Policy/directive issues | Officers feel that the policy/directive behind BWCs limits the potential of BWC technology and does not address the needs of officers who use the technology. |
| Political protection | Officers feel that BWCs purpose is to protect their image and their organization's image. |
| Promoting low morale amongst officers | Officers feel that BWCs promote low morale amongst them and their peers as they feel they cannot act or talk the same with their peers while being filmed. |

| | |
|---|---|
| Provides protection | Officers feel that BWCs provide protection from the footage collected from BWCs. BWC evidence provides protection. |
| Reducing frivolous complaints | Officers perceive BWCs to reduce frivolous complaints because citizens are made aware that they are being recorded and therefore will not make false accusations against officers. |
| Redundancy of reports | Officers feel that BWCs have introduced redundant reports which causes tedious, repetitive work for officers. |
| Relevance of BWCs | Officers express concern for the relevance of BWCs in their police practices. Sometimes in regard to having BWCs on in certain situations or having BWCs in Canadian police practices in general. |
| Robotic/Human | Officers express feeling robotic with BWCs on or exclaiming that they are only human, they make mistakes and are not perfect (robotic). |
| Saves time | Officers perceive BWCs to save them time because of the way they change evidence collection and enhance memory of events. |
| Staffing concerns | Officers express concern over staffing and not having enough officers to be on the road if they are required to review excess BWC footage and complete excess BWC reports. |
| Supervisory frustration | Officers feel frustrated with their supervisors and upper management because of their actions with discipline, reviewing footage or inconsistency in directives. |
| Technical function limitation | Officers express concern over BWCs technological function being limited and not being adequate to fulfill their needs as officers. |
| Time | Officers feel that BWCs impact their time as an officer. They feel that BWCs waste their time or take too much of their time. |
| Transparency interfering with police work | Officers feel that BWCs make police work too transparent and interferes with police officers doing their job. Officers are concerned about police tactics or personal or confidential information being released. They also express concern that officers will change their practices for worse because of the transparent nature of investigations with BWCs. |
| Trust in organization | Officers feel that they cannot trust their organization. Officers feel that their organization does not trust them and therefore does not trust that the organization is working with their best interest in mind. |
| Video storage concerns | Officers express concern over the storage of BWC footage in regard to their privacy and citizen privacy being hacked or accessed. |

Appendix B

*Preliminary Concept Maps*



**Appendix C**

*Interview Consent Form*

Lakehead UNIVERSITY

Project title: An evaluation of the Durham Regional Police Service's body-worn cameras pilot project: Officer interviews

**INTERVIEW CONSENT**

| **Consent and Privacy Options** | **YES** | **NO** |
|---|---|---|
| **1. I understand and agree to participate in the research, I am willing to participate in an in-person or telephone interview to be scheduled/conducted at my convenience.** | | |
| **2. I agree to the interview being tape-recorded** | | |
| **3. I would like to review the transcript of the interview.** | | |
| **4. I am willing to allow the researchers to cite information offered in my interview (cited anonymously, not ascribed directly to me).** | | |
| **5. I would like to receive a copy of the final report when it is published.** | | |
| **6. I would agree to be re-contacted if necessary.** | | |

I have read the information presented in the information letter about a study being conducted by Alana Saulnier of Lakehead University and Carrie Sanders, of Wilfrid Laurier University, Brantford. I have had the opportunity to ask questions about my involvement in this study, and to receive any additional details I wanted to know about the study. I understand that I may withdraw from the study at any time, if I choose to do so, and I agree to participate in this study. I have been given a copy of this form.

_____ _____

Name of Participant Date

_____ _____

Signature of Participant Email Address

## Appendix D

*Thank You Letter*

**An evaluation of the DRPS body-worn cameras pilot project: Officer interviews**
**Thank you letter**

Thank you for participating in this study! We would now like to provide more information about this research and its purpose. After this data has been analyzed, we promise to share a summary of the results with you as soon as possible.

We are interested in how DRPS officers feel about the use of body-worn cameras (BWCs) as well as attitudes that potentially relate to BWCs. Recent controversies over police use of force in the United States (US) have placed a spotlight on public police in Western nations, including Canada. These controversial events contributed to the current crisis in public perceptions of police legitimacy, with the public demanding police reform and accountability. As a global police trend-setter, the US ushered in a new era of BWC-policing that has implications for Canadian police.

The majority of empirical work on the implementation and effects of BWCs is situated in the US. While Canadian evaluations do exist (e.g., Edmonton, 2015; RCMP, 2015; Toronto, 2016), their value is also limited for the specific needs of DRPS. Some evaluations produced limited research data for various reasons (RCMP, 2015), while the results of other services' evaluations have to be considered alongside differences in their size and community served relative to DRPS (e.g., EPS, 2015; TPS, 2016). Finally, some services engaging with BWCs have not yet produced published evaluations (e.g., Amherstburg, Calgary, Hamilton).

In this particular interview, we asked for your perceptions of, and experiences with, BWCs. Perceptions of BWCs are an important area of study because success in policing is characterized in part by officer and public perceptions that they are respected and valued by each other. It is important to understand how and why BWCs influence these perceptions. In the most obvious sense, this understanding of policing success is concerned with community members' perceptions of police. Much less emphasized is that success in policing is also associated with the perceptions of officers – the extent to which officers feel valued and trusted by their employer and the communities they serve. The current climate associated with police adoption of BWCs is one largely framed as a mechanism for scrutinizing untrustworthy officers – a message that may be very harmful to officer morale. However, the emerging literature on BWCs suggests that police leadership and front line officers tend to support BWCs.

Data from this study will help us understand how DRPS officers feel about the use of BWCs. The interview you have taken part in will shed light on the relationship between officer perceptions and BWC use. Research from this project will help DRPS evaluate the BWC pilot project, the results of which will be made available to all Service members in a final report, but will also be published in practitioner and academic journals as well as presented at conferences to inform policies associated with police adoption of BWCs more generally.

We want to remind you that all the information that you shared with us is completely confidential. All data will be stored securely in compliance with Lakehead University Research Ethics Board requirements. The data you have provided will remain confidential and any data used in final reports or presentations will be assigned a pseudonym.

We hope that you experienced some benefits from participating in this study! In particular, you should know that you have made an important contribution to the overall success of this evaluation and we truly appreciate your time. Use of BWCs by police is becoming increasingly common. Your contribution to research increases the Criminology, Psychology, and Legal communities' understandings of how officers feel about the use of BWCs as well as how officers are affected by the use of BWCs.

If you have any questions or are interested in receiving further information concerning this study, including how to access the results of this study, we would be happy to talk with you – please feel free to contact Dr. Alana Saulnier at alana.saulnier@lakeheadu.ca or Sgt. Jason Bagg at jbagg@drps.ca for these purposes. If you have any concerns about the research, please feel free to contact Lakehead University's Research Ethics Officer, Sue Wright at swright@lakeheadu.ca. Thank you again for your participation!

Sincerely,

Alana Saulnier, Ph.D.
Lakehead University

**Appendix E**

*BWC - Interview Guide*

**General Introduction**

Thank you for agreeing to participate in an interview. As you would have read in the Participant Information Statement, this project aims to understand how officers make sense of, perceive and use Body Worn Cameras in their everyday activities. I'd like to remind you that anything you say during the interview will remain confidential to this project, and any information from the interview that we use in publications or presentations will be presented in such a way that you will not be individually identifiable. Also, this research project is not concerned with information that may be private, classified, or in relation to specific criminal offences. You are requested not to disclose such information during the interview.

*Do you have any questions before we start?*

**BWCs and Functional and Operational Use Experiences**

1. This first set of questions is about your experiences with the BWC and related equipment. For each question, I'll begin by asking you to rate the ease or difficulty of using it where 1 = very difficult and 6 = very easy, and then I'll ask you to explain your rating.

| **BWC Function** | **Reveal RS3 Difficult → Easy** | **Comments** |
|---|---|---|
| Checking BWC in/out | ① ② ③ ④ ⑤ ⑥ N/A | |
| Turning recording on and off | ① ② ③ ④ ⑤ ⑥ N/A | |
| Uploading video to DRPS system | ① ② ③ ④ ⑤ ⑥ N/A | |
| Reviewing the video recordings | ① ② ③ ④ ⑤ ⑥ N/A | |
| Requesting copies of video | ① ② ③ ④ ⑤ ⑥ N/A | |
| Reporting using BWV | ① ② ③ ④ ⑤ ⑥ N/A | Compare to case when writing report with BWC as opposed to not... |
| The BWV policy and procedures | ① ② ③ ④ ⑤ ⑥ N/A | |

   a. Ps Explanation
      - Prompts on what to cover:
        - What is it that you find difficult or easy?

2. Tell me a bit about your experience with BWCs?

3. Can you tell us a bit about the quality of the video images produced by the BWCs?

    a. How do you find the quality of the videos?
    b. What do you like about the video quality?

        - [Probe: overall context captured (field of view); clarity of image, clarity of sound, ability to find date and time, focus on subject of interest, clarity of movement]

    c. What, if any, problems do you have with the video quality?

        - [Probe: overall context captured (field of view); clarity of image, clarity of sound, ability to find date and time, focus on subject of interest, clarity of movement]

4. Have you experienced any difficulties with using the BWC?

    a. If so, can you tell us about those experiences and what the difficulties were?
    b. How did you overcome them?

5. Different environments and weather conditions may affect not only the quality of the video and sound recordings of BWV but also the operation of the equipment. Combinations of lighting, sound and weather conditions may have complex outcomes for BWV quality. I'd like to know about your experience of using the camera in different contexts (e.g., in daylight versus at night time; inside versus outside; in bad weather; in noisy spaces). What different situations have you activated your BWC in?

6. When reviewing your recordings, have you found that these different contexts impact the video quality? If so in what ways?

7. Are there any other contexts or conditions in which you have encountered problems with the BWV equipment functioning?

8. What changes would you recommend for the technical functionality of BWC? Why?

9. Are there other features that you would like to see BWCs have? For example, automated activation, transcription, facial recognition or anything else?

**How is the performance of occupational tasks impacted by officers' use of BWCs?**

10. How, if at all, do BWCs change the way you do your work?

    - [Probe: time completing reports, quality of reports, quality of evidence for courts, time in court, use of force, everyday policing]

11. Since the implementation of BWCs, have you ever used the video clips produced? (Training, performance management)

a. If yes, can you tell us what you used it for?
b. Do you review BWCs when writing up your reports?
    a. If yes, how often do you do it?
    b. If no, why do you not review them?
    c. When is BWC footage valuable for reporting? Why or why not?
c. Do you know of any others in your service who have used it and what they used it for?

12. In your opinion, do you find BWCs to impact the way investigations are conducted?

    a. If yes, how so? Does it affect investigation time?

13. Are there any ways in which BWCs make you feel more stressed about your job?

14. Alternatively, are there any ways in which BWCs reduce stress about your job?

15. Have you been to court in a case involving BWC footage?

    a. If yes: Based on your experience, what impact, if any, did the BWC evidence have on the court case?

**Using BWCs and their Perceived Impact**

16. In your experience, does the presence of a BWC have any effect on the behaviour of citizens during your interactions with them?

    a. If so, can you explain how you see it affecting behaviour?

        - [Probes: physical aggression; verbal rudeness; threats to complain; willingness to chat informally; willingness to provide incident related information; compliance with informal suggestions (e.g., leave area, etc.); compliance with formal instructions (e.g., provide ID, exist vehicle, etc.)]

    b. If not, can you explain why you think that is?

17. Have you replayed video to a person who has been part of an investigation (complainants, victims, those detained, arrested) or is otherwise part of an investigation?

    a. If yes, what impact, if any, did playing the video have?
    b. If no, is there any reason that you haven't played it back to anyone?

**Subjectivity of BWC Use and Policy**

18. For approximately what percent of your incident reports do you have BWC footage?

19. Can you tell us a bit about when you would decide to turn the BWC on and off?

a. What sort of reasons prompt you to record these incidents? (WHY THESE INCIDENTS?)

b. For your incident reports that don't include BWC footage, why didn't you use your BWC? (WHY DO YOU CHOOSE NOT TO USE BWCS?)

c. What factors or situations shape when you decide to turn off the camera during a call for service? (SENSITIVE CASE? PRIVACY FOR PUBLIC?)

20. What has informed your understanding of when to turn the BWCs on and off?
    a. (directive, personal experiences, how other people use it, before and after using BWCs)

21. If you were to inform or build policy around the use of BWCs, what do you see as important things to be covered by the policy?

    a. What are your concerns about the BWC policy DRPS might develop?
    b. What criteria would make for bad policy? What policies do you feel wouldn't be beneficial in regard to the use of BWCs?

**BWCs, Accountability and Transparency**

*Now, we would like to ask you about your perception of BWCs in policing.*

22. In your perspective, why do you think BWCs are being implemented?

23. In your opinion, what purpose(s) do BWCs serve?

    a. [Probe: For police officers, police administration, the community, the courts]

24. What does police accountability mean to you?

25. How, if at all, do BWCs impact police accountability?

26. Do you think BWCs will affect the relationship between police and communities?

    a. If yes, in what ways do you think it will affect them?
    b. If no, why do you think there will not be any impact?

27. Can you tell us what transparency means to you in the context of policing?

28. In your opinion, do BWCs impact transparency? Why or why not?

29. In your opinion, how do you think BWCs will impact your relations with your co-workers?

30. In your opinion, how do you think BWCs will impact your relations with your supervisors?

31. How, if at all, do you think DRPS' use of BWCs affects your relationship of trust with the Service?
    a. [Probe: Your ability to trust the Service? The Service's ability to trust you?]

**Benefits / Challenges of BWC**

32. What, if any, benefits do BWCs bring to policing? In what areas of your work do you see these benefits?

33. If BWCs were capable of improving policing, what would improving policing mean to you?

34. What, if any, difficulties or problems can BWCs bring to policing?

    - [Probes: Do you have any concerns about privacy and BWC use? Would you explain those for me?]
    - [Probes: Do you have any concerns about officer discretion and BWC use? Would you explain those for me?]

**Closing**

35. Has your opinion or perceptions regarding BWC changed since the service first discussed implementing it?

    a. If so, how has it changed?

36. Do you think BWCs should be a permanent policing tool?

    a. Why / why not?

37. Do you have any other comments or perceptions you wish to share about BWCs that have not been covered in our interview?

**Please answer a few demographic questions. Circle or write your response.**

30) What is your gender?
31) What is your current age?
32) What is your racial / ethnic background?
33) How many years of service do you have?

*Again, we wish to thank you for taking the time to participate in our study.*

## References

Adams, Ian and Sharon Mastracci. (2019). Police body-worn cameras: Effects on officers' burnout and perceived organizational support. *Police Quarterly,* DOI: 10.1177/1098611118783987.

Adams, J.S. (1963). Toward an understanding of inequity. *Journal of Abnormal and Social Psychology, 67, 422-436.*

Amherstburg Police Service. (2016). A CLEAR COMMUNITY CONNECTION. Annual Report. Amherstburg, Ontario, Canada.

Ariel, Barak. (2016a). Police body cameras in large police departments. *The Journal of Criminal Law and Criminology, 106*(4): 729-768.

Ariel, Barak. (2016b). Increasing cooperation with the police using body worn cameras. *Police Quarterly, 19*(3): 326–362.

Ariel, B., Farrar, W. A., & Sutherland, A. (2015). The effect of police body-worn cameras on use of force and citizens' complaints against the police: A randomized controlled trial. *Journal of quantitative criminology*, *31*(3), 509-535.

Ariel, B., Sutherland, A., Henstock, D., Young, J., Drover, P., Sykes, J., ... & Henderson, R. (2017). Global Multi-Site Randomized Controlled Trial Shows that Police Body-Worn-Cameras Reduce Citizen's Complaints against the Police: A Case of Contagious Accountability?'. *Criminal Justice and Behaviour*, *12*(3), 453-463.

Ball, K. (2010). Workplace surveillance: An overview. Labor History, 51(1), 87–106.

Ballucci, D., Gill, C., & Campbell, M. A. (2017). The power of attitude: the role of police culture and receptivity of risk assessment tools in IPV calls. *Policing: a journal of policy and practice*, *11*(3), 242-257.

Barela, Brian Paul. 2017. *Understanding the effects of body-worn cameras on police interactions with the public: Impact on number of assaults on officers and use of force complaints against officers*. (Master's thesis). University of Colorado, Colorado Springs.

Bies, R. J., & Moag, J. F. (1986). Interactional Justice: Communication criteria of fairness. In R. J. Lewicki, B. H. Sheppard, & M. H. Bazerman (Eds.), *Research on negotiations in organizations (Vol. 1, pp. 43-55).* Greenwich, CT: JAI Press.

Bishopp, S. A., Leeper Piquero, N., Worrall, J. L., & Piquero, A. R. (2018). Negative affective responses to stress among urban police officers: A general strain theory approach. *Deviant Behavior*, 1-20.

Bradford, B., Quinton, P., Myhill, A., & Porter, G. (2014). Why do 'the law'comply? Procedural justice, group identification and officer motivation in police organizations. *European journal of criminology*, *11*(1), 110-131.

Bradley, D., & Nixon, C. (2009). Ending the 'dialogue of the deaf': Evidence and policing policies and practices. An Australian case study. *Police Practice and Research: An International Journal*, *10*(5-6), 423-435.

Bud, T. K. (2016). The rise and risks of police body-worn cameras in Canada. *Surveillance & Society*, *14*(1), 117-121.

Build us a body-worn camera with technology 'that doesn't fail,' Toronto police tell manufacturers | CBC News. (2017). Retrieved from https://www.cbc.ca/news/canada/toronto/toronto-body-worn-cameras-police-technology-1.4357773

Butler, A. (2012). The effects of organizational justice perceptions associated with the use of electronic monitoring on employees' organizational citizenship and withdrawal behaviours: A social exchange perspective (Electronic Theses and Dissertations, Paper 478). Ontario, Canada: University of Windsor.

Calgary Police Service. (2015, November 24). Body Worn Camera. Retrieved from https://www.calgary.ca/cps/Pages/Body-Worn-Camera.aspx

Chan, Janet, David Brereton, Margot Legosz, and Sally Doran. 2001. *E-policing: The impact of information technology on police practices*. Brisbane, Australia: Queensland Criminal Justice Commission.

Chan, J. B. L. (2003). Police and new technologies. In T. Newburn (Ed.), Handbook of policing (pp. 655-679). Portland, OR: Willan.

Charmaz, K. (2008). Reconstructing grounded theory. *The SAGE handbook of social research methods*, 461-478.

Charmaz, K. (2014). *Constructing grounded theory*. sage.

Cohen-Charash, Y., & Spector, P.E. (2001). The role of justice in organisations: A meta-analysis. Organisational Behavior and Human Decision Processes, 86(2), 278-321.

Collins, P.A. and Gibbs, A.C.C. (2003), "Stress in police officers: a study of the origins, prevalence and severity of stress-related symptoms within a county police force", Occupational Medicine, Vol. 53 No. 4, pp. 256-64.

Colquitt, J.A. (2001). On the dimensionality of organisational justice: A construct validation of a measure. Journal of Applied Psychology, 86(3), 386-400.

Colquitt, J.A., Conlon, D.E., Wesson, M.J., Porter, C.O.L.H., & Ng, K.Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organisational justice research. Journal of Applied Psychology, 86(3), 425-445.

Cropanzano, R., & Folger, R. (1991). Procedural justice and worker motivation. In R. Steers & L. Porter (Eds.), *Motivation and work behavior* (pp. 131–143). New York: McGraw–Hill.

Cropanzano, R., & Greenberg, J. (1997). Progress in organizational justice: Tunneling through the maze. In C. L. Cooper & I. T. Robertson (Eds.), *International review of industrial and organizational psychology* (Vol. 12, pp. 317-372). New York: Wiley.

Culhane, SE., Boman, J.H. and Schweitzer, K. (2016), "Public perceptions of the justifiability of police shootings: the role of body-worn cameras in a pre- and post-Ferguson experiment", Police Quarterly, Vol. 19 No. 3, pp. 251-274.

De Angelis, J., & Kupchik, A. (2007). Citizen oversight, procedural justice, and officer perceptions of the complaint investigation process. Policing: An International Journal of Police Strategies & Management, 30(4), 651-671.

Deschamps, F.P., Paganon-Badinier, I., Marchand, A.C. and Merle, C. (2003), "Sources and assessment of occupational stress in the police", Journal of Occupational Health, Vol. 45, pp. 358-64.

Dowler, K. (2005). Job satisfaction, burnout, and perception of unfair treatment: The relationship between race and police work. *Police Quarterly, 8*(4), 476-489.

Edmonton Police Service. (2015). *Body worn video: Considering the evidence. Final report of the Edmonton Police Service body worn video pilot project*. http://www.edmontonpolice.ca/News/BWV.aspx

Ellis, Tom, Craig Jenkins, and Paul Smith. 2015. *Evaluation of the introduction of personal issue body worn video cameras (Operation Hyperion) on the Isle of Wight: Final report to Hampshire Constabulatory*. Institute of Criminal Justice Studies, University of Portsmouth. Retrieved from http://www.port.ac.uk/media/contacts-and-departments/icjs/downloads/Ellis- Evaluation-Worn-Cameras.pdf.

Folger, R. (1977). Distributive and procedural justice: Combined impact of voice and improvement

Fouche, Adam. 2014. Officer attitudes on deployment of body-worn cameras in the University of Georgia Police Department patrol division. *Campus Law Enforcement Journal, 44*(3): 21-28.

Gaub, Janne E., David E. Choate, Natalie Todak, Charles N. Katz, and Michael D. White. 2016. Officer perceptions of body-worn cameras before and after deployment: A study of three departments. *Police Quarterly, 19*(3): 275–302.

Gaub, Janne E., Natalie Todak, and Michael D. White. 2018. One Size Doesn't Fit All: The Deployment of Police Body-Worn Cameras to Specialty Units. *International Criminal Justice Review*, DOI: 10.1177/1057567718789237.

Glaser, B., & Strauss, A. (1967). The discovery of grounded theory. 1967. *Weidenfield & Nicolson, London*, 1-19.

Goetschel, Max, and Jon M. Peha. 2017. Police perceptions of body-worn cameras. *American Journal of Criminal Justice*, *42*(4): 698-726.

Goodall, Martin. 2007. *Guidance for the police use of body-worn video devices: Police and crime standards directorate*. Home Office. Retrieved from http://library.college.police.uk/docs/homeoffice/guidance-body-worn-devices.pdf.

Goodison, Sean, and Tom Wilson. 2017. *Citizen perceptions of body worn cameras: A randomized controlled trial*. Police Executive Research Forum. Retrieved from https://perf.memberclicks.net/assets/bodyworncameraperceptions.pdf.

Gramaglia, Joseph A., and Scott W. Phillips. 2017. Police officers' perceptions of body-worn cameras in Buffalo and Rochester. *American Journal of Criminal Justice*, *43*(2): 313-328.

Gray, D. E. (2013). *Doing research in the real world*. Sage.

Greenberg, J. (1987). Reactions to procedural injustice in payment distributions: Do the means justify the ends? *Journal of Applied Psychology*, 72, 55-61.

Greenberg, J. (1990). Organizational justice: Yesterday, today, and tomorrow. *Journal of management*, *16*(2), 399-432.

Grossmith, Lynne, Catherine Owens, Will Finn, David Mann, Tom Davies, and Laura Baika. (2015). *Police, camera, evidence: London's cluster randomised controlled trial of body worn video.* London, UK: College of Policing Limited and the Mayor's Office for Policing and Crime

Guerin, Paul, Dan Cathey, Craig Pacheco, Alex Tonigan, Alex Adams, Sam Torres, and Erin Coleman. (2016). *City of Albuquerque Police Department on body camera system research*. Institute for Social Research, University of New Mexico. Retrieved from https://www.cabq.gov/police/documents/obcs-report-draft-all-bureaus-master-final_v102022016.pdf.

Haas, N. E., Van Craen, M., Skogan, W. G., & Fleitas, D. M. (2015). Explaining officer compliance: The importance of procedural justice and trust inside a police organization. *Criminology & criminal justice*, *15*(4), 442-463.

Headley, Andrea. M., Rob T. Guerette, and Auzeen Shariati. (2017). A field experiment of the impact of body-worn cameras (BWCs) on police officer behavior and perceptions. *Journal of Criminal Justice, 53*: 102-109.

Homans, G. C. (1961). Social behaviour: Its elementary forms. London: Routledge and Kegan Paul.

Huff, Jessica, Charles M. Katz, and Vincent J. Webb. (2018). Understanding police officer resistance to body-worn cameras. *Policing: An International Journal, 41*(4): 482-495

Hyatt, Jordan M., Renee J. Mitchell, and Barak Ariel. (2017). The effects of a mandatory body-worn camera policy on officer perceptions of accountability, oversight, and departmental culture. *Villanova Law Review, 62*(5): 1005-1035.

James, Z., & Southern, R. (2007). *Plymouth head camera project: Public relations evaluation*. Social Research & Regeneration Unit. Plymouth, UK: University of Plymouth.

Jennings, Wesley G., Lorie A. Fridell, and Mathew D. Lynch. (2014). Cops and cameras: Officer perceptions of the use of body-worn cameras in law enforcement. *Journal of Criminal Justice, 42*(6): 549-556.

Jennings, Wesley G., Mathew D. Lynch, and Lorie A. Fridell. (2015). Evaluating the impact of police officer body-worn cameras (BWCs) on response-to-resistance and serious external complaints: Evidence from the Orlando Police Department (OPD) experience utilizing a randomized controlled experiment. *Journal of Criminal Justice, 43*(6): 480-486.

Jennings, W.G., Fridell, L.A., Lynch, M.D., Jetelina, K.K. and Reingle Gonzalez, J.M. (2017), "A quasi- experimental evaluation of the effects of police body-worn cameras (BWCs) on response-to- resistance in a large metropolitan police department", Deviant Behavior, Vol. 38, pp. 1332-1339.

Katz, Charles M., David E. Choate, Justin R. Ready, and Lidia Nuño. (2014). *Evaluating the impact of officer worn body cameras in the Phoenix Police Department*. Center for Violence Prevention & Community Safety, Arizona State University. Retrieved from https://publicservice.asu.edu/sites/default/files/ppd_spi_feb_20_2015_final.pdf.

Koen, Marthinus C. (2016). *On-set with body worn cameras in a police organization: Structures, practices, and technological frames*. (Doctoral dissertation). George Mason University.

Kyle, M. J., & White, D. R. (2017). The impact of law enforcement officer perceptions of organizational justice on their attitudes regarding body-worn cameras. *Journal of crime and justice*, *40*(1), 68-83.

Lambert, E. G., & Hogan, N. L. (2013). The association of distributive and procedural justice with organizational citizenship behavior. *The Prison Journal*, *93*(3), 313-334.

Lawshe, Nathaniel. L. (2018). *The Role of Organizational Justice in Predicting Attitudes Toward Body-Worn Cameras in Police Officers*. Unpublished master's thesis. University of South Florida.

Lawshe, N. L., Burruss, G. W., Giblin, M. J., & Schafer, J. A. (2019). Behind the lens: police attitudes toward body-worn cameras and organizational justice. *Journal of Crime and Justice, 42*(1), 78-97.

Leiter, M. P., & Maslach, C. (2004). Areas of worklife: A structured approach to organizational predictors of job burnout. *Research in occupational stress and well being*, *3*(1), 91-134.

Leventhal, G. S. (1980). What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. J. Gergen, M. S. Greenberg, & R. H. Willis (Eds.), *Social exchange: Advances in theory and research* (pp. 27–55). New York: Plenum.

Liberman, A. M., Best, S. R., Metzler, T. J., Fagan, J. A., Weiss, D. S., & Marmar, C. R. (2002). Routine occupational stress and psychological distress in police. *Policing: An International Journal of Police Strategies & Management*.

Lind, E. A., Kanfer, R., & Earley, P. C. (1990). Voice, control, and procedural justice: Instrumental and noninstrumental concerns in fairness judgments. *Journal of Personality & Social Psychology*, 59, 952–959.

Lind, E. A., & Tyler, T. R. (1988). *The social psychology of procedural justice*. New York: Plenum Press.

Lum, Cynthia, Christopher S. Koper, Linda Merola, Amber Scherer, and Amanda Reioux. (2015). *Existing and ongoing body worn camera research: Knowledge gaps and opportunities*. Report for the Laura and John Arnold Foundation. Fairfax, VA: Center for Evidence-Based Crime Policy, George Mason University.

Lum, C., Stoltz, M., Koper, C. S., & Scherer, J. A. (2019). Research on Body-Worn Cameras: What We Know, What we Need to Know. *Criminology and public policy, 18*(1).

Lum, C., Koper, C. S., & Willis, J. (2016). Understanding the limits of technology's impact on police effectiveness. *Police Quarterly*, *20*(2), 135-163.

Makin, David A. (2016). When the watchers are watched: An interpretive phenomenological analysis of body-worn cameras. *Journal of Qualitative Criminal Justice and Criminology*, *4*(1): 113-151.

Malm, A., & White, M. D. (2020). *Cops, cameras, and crisis : The potential and the perils of police body-worn cameras*. Retrieved from https://ebookcentral-proquest-com.libproxy.wlu.ca

Manning, Peter K. (2008). *The technology of policing*. New York: New York University Press.

Maskaly, J., Donner, C., Jennings, W. G., Ariel, B., & Sutherland, A. (2017). The effects of body-worn cameras (BWCs) on police and citizen outcomes: A state-of-the-art review. *Policing: An International Journal of Police Strategies & Management*, *40*(4), 672-688.

McCarty, W. P., Aldirawi, H., Dewald, S., & Palacios, M. (2019). Burnout in blue: an analysis of the extent and primary predictors of burnout among law enforcement officers in the United States. *Police quarterly*, *22*(3), 278-304.

McCarty, W. P., & Skogan, W. G. (2013). Job-related burnout among civilian and sworn police personnel. *Police quarterly*, *16*(1), 66-84.

McLean, Kyle, Scott E. Wolfe, Margaret M. Chrusciel, and Robert J. Kaminski. 2015. *Body-worn cameras in South Carolina: Law enforcement executives' views concerning use, policies, and outcomes*. University of South Carolina. Retrieved from http://www.sc.edu/study/colleges_schools/artsandsciences/criminology_and_criminal_justice/do cuments/2015_census_report.pdf

McClure, David, Nancy La Vigne, Mathew Lynch, Laura Golian, Daviel Lawrence, and Aili Malm. 2017. *How body cameras affect community members' perceptions of police: Results from a randomized controlled trial of one agency's pilot*. Justice Policy Center, Urban Institute. Retrieved from https://www.urban.org/sites/default/files/publication/91331/2001307-how-body- cameras-affect-community-members-perceptions-of-police_1.pdf.

McCluskey, John. D., Craig D. Uchida, Shellie E. Solomon, Alese Wooditch, Christine Connor, and Lauren Revier. 2017. *Assessing the effects of body-worn cameras on procedural justice in the LAPD*. Rochester Institute of Technology and Justice Security Strategies, Inc. Retrieved from http://bwctta.com/sites/default/files/Files/Resources/1%20Procedural%20Justice%20CRIM%20 %2010%2017%202017.pdf.

Meehan, A. J. (2000). Transformation of the oral tradition of the police subculture through the introduction of information technology. *Sociology of Crime, Law and Deviance*, *2*, 107-132.

Montreal police give thumbs down to body cameras | CBC News. (2019). Retrieved from https://www.cbc.ca/news/canada/montreal/montreal-police-department-body-cameras-1.4998365

Morash, M., Haarr, R. and Kwak, D. (2006), "Multilevel influences on police stress", Journal of Contemporary Criminal Justice, Vol. 22, pp. 26-43.

Morrow, Weston J., Charles M. Katz, and David E. Choate. 2016. Assessing the impact of body-worn cameras on arresting, prosecuting, and convicting suspects of intimate partner violence. *Police Quarterly, 19*(3): 303–325.

Myhill, A., & Bradford, B. (2013). Overcoming cop culture? Organisational justice and police officers' attitudes toward the public. Policing: An International Journal of Police Strategies & Management, 36(2), 338-356.

National Law Enforcement and Corrections Technology Center (NLECTC), & United States of America. (2012). Primer on Body-Worn Cameras for Law Enforcement.

Newell, Bryce Clayton, and Ruben Greidanus. 2018. Officer discretion and the choice to record: Officer attitudes towards body-worn camera activation. *North Carolina Law Review, 96*.

Noblet, A. J., Rodwell, J. J., & Allisey, A. F. (2009). Police stress: the role of the psychological contract and perceptions of fairness. *Policing: An International Journal of Police Strategies & Management*.

Obasi, Jonah E. 2017. *Police officers' perceptions of body-worn camera technology*. (Doctoral dissertation). Walden University.

Orlikowski, W. J., & Gash, D. C. (1994). Technological frames: Making sense of information technology in organizations. *ACM Transactions on Information Systems, 12*(2), 174–207. h t t p s : / / d o i . o rg/ 1 0. 1 145 / 196 734 .1 967 45

Owens, Catherine, and William Finn. 2018. Body-worn video through the lens of a cluster randomized controlled trial in London: Implications for future research. *Policing: A Journal of Policy and Practice, 12*(1): 77-82.

Pelfrey, William. V., and Steven Keener. 2016. Police body worn cameras: A mixed method approach assessing perceptions of efficacy. *Policing: An International Journal of Police Strategies and Management, 39*(3): 491-506.

Pelfrey Jr, W. V., & Keener, S. (2018). Body-worn cameras and officer perceptions: a mixed-method pretest posttest of patrol officers and supervisors. *Journal of Crime and Justice*, 1-18.

Phelps, Joshua M., Jon Strype, Sophie Le Bellu, Saadi Lahlou, and Jan Aandal. 2018. Experiential learning and simulation-based training in Norwegian police education: Examining body-worn video as a tool to encourage reflection. *Policing: A Journal of Policy and Practice, 12*(1): 50-65.

Pogrebin, M. R., & Poole, E. D. (1988). Humor in the briefing room: A study of the strategic uses of humor among police. *Journal of contemporary ethnography*, *17*(2), 183-210.

Postman, Neil (1992) *Technology: The Surrender of Culture to Technology.* New York: Vintage Books.

Roberts, K., & Herrington, V. (2013). Organisational and procedural justice: A review of the literature and its implications for policing. *Journal of policing, intelligence and counter terrorism*, *8*(2), 115-130.

Rosenbaum, D. P., & McCarty, W. P. (2017). Organizational justice and officer "buy in" in American policing. Policing: An International Journal of Police Strategies & Management, 40(1), 71–85.

Sanders, C.B. and Condon, C. (2017) "Ontological Security and Intelligence Analysis: Studying the work of crime analysts". *Global Crime,* DOI: 10.1080/17440572.2017.1323637

Sanders, C. and Lavoie, J. (in press) Boundary Objects and Technological Frames: Officers' Perceptions and Experiences Using Mental Health Screeners on the Frontline" *Policing and Society*.

Saulnier, A., Sanders, C.B., Lahay, R., Krupp, D.B., Lindsay, S.M., Couture-Carron, A., Scholte, D., Doiron, C., & Burke, K.C. (2020). Evaluation of the DRPS BWC pilot project: A report prepared for the Durham Regional Police Service. Whitby, ON, Canada.

Saulnier, A., St Louis, E., & McCarty, W. (2019). Procedural justice concerns and support for BWCs: turning the lens to officer perceptions. *Policing: An International Journal*.

Schaible, L. M., & Gecas, V. (2010). The impact of emotional labor and value dissonance on burnout among police officers. *Police Quarterly*, *13*(3), 316-341.

Sherman, L. W. (2013). The rise of evidence-based policing: Targeting, testing, and tracking. *Crime and justice*, *42*(1), 377-451.

Sivasubramaniam, D., & Heuer, L. (2007). Court Review: Volume 44, Issue 1/2-Decision Makers and Decision Recipients: Understanding Disparities in the Meaning of Fairness. *Court Review: The Journal of the American Judges Association*, 222.

Smith, R., & Shalev Greene, K. (2015). Recognizing risk: The attitudes of police supervisors to the risk assessment process in missing person investigations. *Policing: A Journal of Policy and Practice*, *9*(4), 352-361.

Smykla, J.O., Crow, M.S., Crichlow, V.J. and Snyder, J.A. (2015), "Police body-worn cameras: perceptions of law enforcement leadership", American Journal of Criminal Justice, Vol. 52, pp. 424-443.

Sousa, W. H., Miethe, T. D., & Sakiyama, M. (2017). Inconsistencies in public opinion of body-worn cameras on police: Transparency, trust, and improved police–citizen relationships. Policing: A Journal of policy and Practice, 12(1), 100-108.

SPVM. 2019. PROJET PILOTE DES CAMÉRAS PORTATIVES DU SPVM. Service de police de la Ville de Montréal. Imprimé au Canada.

Stanton, J. M. (2000). Reactions to employee performance monitoring: Framework, review, and research directions. Human Performance, 13(1), 85–113.

St Louis, E., Saulnier, A., & Walby, K. (2019). Police use of body-worn cameras: Challenges of visibility, procedural justice, and legitimacy. *Surveillance & Society, 17*(3), 305-321. Retrieved from https://libproxy.wlu.ca/login?url=https://search-proquest-com.libproxy.wlu.ca/docview/2290883967?accountid=15090

Srivastava, S. (2009). Explorations in police organisation: An Indian context. International Journal of Police Science & Management, 11(3), 255-273.

Sutherland, Alex, Barak Ariel, William Farrar, and Randy De Anda. 2017. Post-experimental follow-ups - Fade-out versus persistence effects: Rialto police body-worn camera experiment four years on. *Journal of Criminal Justice, 53*: 110-116.

Sweeney, P. D., & McFarlin, D. B. (1993). Workers' evaluations of the "ends" and the "means": An examination of four models of distributive and procedural justice. *Organizational Behavior and Human Decision Processes*, 55, 23–40.

Tankebe, J., & Ariel, B. (2016). Cynicism towards change: The case of body-worn cameras among police officers. *Hebrew University of Jerusalem Legal Research Paper*, (16-42).

Tanner, S., & Meyer, M. (2015). Police work and new 'security devices': A tale from the beat. *Security Dialogue, 46(*4), 384-400.

Thibaut, J. W., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ: Erlbaum**.**

Thunder Bay Police Service. (2019). *Body worn camera viability review*. https://www.thunderbaypolice.ca/sites/default/files/pdfs/tbps_bwc_report.pdf

Todak, N. (2017). The decision to become a police officer in a legitimacy crisis. *Women & criminal justice*, *27*(4), 250-270.

Toronto Police Service. (2016). *Body-worn cameras: A report on the findings of the pilot project to test the value and feasibility of body-worn cameras for police officers in Toronto*. Toronto, ON, Canada: Author.

Trinkner, R., Tyler, T. R., & Goff, P. A. (2016). Justice from within: The relations between a procedurally just organizational climate and police organizational efficiency, endorsement of democratic policing, and officer well-being. *Psychology, public policy, and law*, *22*(2), 158.

Tyler, T. R. (1994). Psychological models of the justice motive: Antecedents of distributive and procedural justice. *Journal of Personality & Social Psychology, 67, 850-863.*

Tyler, T. R. (2011). *Why people cooperate: The role of social motivations*. New York, NY: Princeton University Press.

Tyler, T. R., & Bies, R. J. (1990). Beyond formal procedures: The interpersonal context of procedural justice. In J. S. Carroll (Ed.), *Applied social psychology and organizational settings* (pp. 77–98).

Tyler, T. R., & Wakslak, C. J. (2004). Profiling and police legitimacy: Procedural justice, attributions of motive, and acceptance of police authority. *Criminology*, *42*(2), 253-282.

Victoria Police Department (2010). Report of Findings – Body Worn Video & In Vehicle Video

White, Michael D., Janne E. Gaub, and Natalie Todak. 2018a. Exploring the potential for body-worn cameras to reduce violence in police-citizen encounters. *Policing: A Journal of Policy and Practice, 12*(1): 66-76.

White, Michael D., Natalie Todak, Janne E. Gaub. 2017. Assessing citizen perceptions of body-worn cameras after encounters with police. *Policing: An International Journal of Police Strategies and Management, 40*(4): 689-703.

White, Michael D., Natalie Todak, Janne E. Gaub. 2018b. Examining Body-Worn Camera Integration and Acceptance Among Police Officers, Citizens, and External Stakeholders. *Criminology & Public Policy, 17*(3): 649-677.

Willis, J. J., Koper, C., & Lum, C. (2018). The adaptation of license-plate readers for investigative purposes: Police technology and innovation re-invention. *Justice quarterly*, *35*(4), 614-638.

Wilson, James Q. 1968. *Varieties of Police Behavior*. Cambridge, MA: Harvard University Press.

Wolfe, S.E., & Piquero, A.R. (2011). Organisational justice and police misconduct. Criminal Justice and Behavior, 38(4), 332-353.

Violanti, J. M., & Aron, F. (1995). Police stressors: Variations in perception among police personnel. *Journal of Criminal Justice*, *23*(3), 287-294.

Yokum, David, Anita Ravishankar, and Alexander Coppock. 2017. *Evaluating the effects of police body-worn cameras: A randomized controlled trial*. The Lab @ DC. Retrieved from http://bwc.thelab.dc.gov/TheLabDC_MPD_BWC_Working_Paper_10.20.17.pdf.

Zhao, J. S., He, N., & Lovrich, N. (2002). Predicting five dimensions of police officer stress: Looking more deeply into organizational settings for sources of police stress. *Police quarterly*, *5*(1), 43-62.