QUANTITATIVE STUDY EXPLORING THE PERCEPTIONS OF BODY-WORN CAMERA USE IN THE TEXAS JUVENILE JUSTICE DEPARTMENT

by

David Dean Stender

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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Abstract

Social justice issues led to the implementation of body-worn cameras (BWC) in police departments throughout the United States. This widespread implementation provided research results to assist other police agencies in considering implementation; however, no similar criminal justice solution for adult and juvenile corrections has been implemented with the same level of practicality. BWCs have the potential to protect inmates according to the Prison Rape Elimination Act's (PREA) requirements and represent the most critical social justice issue in corrections: advocating civil rights. The former Texas Youth Commission (TYC) was re-branded as the Texas Juvenile Justice Department (TJJD) due to a history of sexual assault and civil rights abuse (Cate, 2016; Donnelly, 2018). Applying the findings on BWC implementation by law enforcement agencies and the few existing studies in adult prisons reveals that implementing BWCs in juvenile justice provides an opportunity to thwart the perceptions of a lack of legitimacy and procedural justice. Yet, little research exists on implementing BWCs in a corrections environment. This study aims to examine TJJD facility staff perceptions of BWCs using pre-existing surveys following a non-experimental repeated cross-sectional research design exploring their perceptions of BWCs. Recommendations for further research include what BWC implementation procedures differ in corrections based upon differing usage and compliance procedures, requiring differing decision criteria for corrections environments.

Keywords: Body-Worn Cameras, Juvenile Justice, Procedural Justice

Copyright Page (Optional)

Dedication

This manuscript is dedicated to my daughters, who endured the loss of my time and attention as I worked on coursework and this manuscript leading to the completion of this goal. It is also dedicated to the glory of our Lord and Savior, Jesus Christ, from whom all things come.

Acknowledgments

I want to acknowledge the cooperation and support of the Texas Juvenile Justice Department, without which this work would not be possible. Specifically, I would like to acknowledge the assistance of Emily Knox, TJJD Research Director, and James Elliott, my former boss and forever friend, who drove and encouraged my progress. I would also like to acknowledge the assistance of William 'Bill' Wells, the Chair of the Sam Houston State University Criminal Justice Department.

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List of Abbreviations

ACE	Adverse Childhood Experience
BWC	Body-Worn Camera
BJA	Bureau of Justice Statistics
KPICD	Karyn Purvis Institute of Child Development
M&I	Monitoring and Inspections
PREA	Prison Rape Elimination Act
PIR	Public Information Request
RS	Regulation and Safety Unit
RQ	Research Question
SSO	Systematic Social Observation
TJJD	Texas Juvenile Justice Department
TYC	Texas Youth Commission
TBRI	Trust-Based Relationship Intervention
YDCs	Youth Development Coaches

CHAPTER ONE: INTRODUCTION

Overview

Changing an agency's name does little to erase the impact of sexual assault and civil rights abuse controversies, as shown by the former Texas Youth Commission (TYC). Though the TYC re-branded to the Texas Department of Juvenile Justice Department (TJJD) in 2011, it still suffers from public perceptions of a lack of legitimacy similar to what police have experienced over the last decade (Cate, 2016; Donnelly, 2018). Police agencies responded to perceptions of illegitimacy by deploying body-worn cameras (BWCs) with the assistance of funding from the Department of Justice and recommendations from the President's Task Force on 21st Century Policing (Jennings et al., 2015; Lum et al., 2019; Wallace et al., 2018). BWCs provide a tool for police to address accountability by providing a voice for officers and the public that supervisors and legal authorities can review. Implementing BWCs in Texas juvenile justice came at the TJJD executive director's request to the Texas Governor's Office of Budget, Planning and Policy, and the Legislative Budget Board in August 2018, resulting in preliminary trial services in October 2018 (Linder, 2018). This chapter provides the background of the TJJD controversy, the problem statement, purpose statement, significance of the study, research questions, definitions associated with the study, research design, assumptions and limitations, and organization of the remainder of the study.

Background of the Study

On February 23, 2005, the Texas Rangers began investigating a sexual assault involving senior leaders in TYC's West Texas State School in Pyote, Texas (Cate, 2016; Donnelly, 2018). In March 2005, the United States Department of Justice investigated civil rights abuses within multiple TYC facilities. Results of the July 2008 U.S. Department of Justice Bureau of Justice

Statistics (DOJBJS) reports indicated that TYC led the nation in confirmed assaults in 2005 and 2006 (Donnelly, 2018). The DOJBJS showed that TYC's Corsicana and Victory Field facilities had the highest sexual abuse rates of all juvenile facilities in the nation, with a combined 23% of youth claiming sexual contact with staff in both facilities (Donnelly, 2018). Further evidence of issues within the Texas juvenile justice system came when the Office of the Independent Ombudsman submitted a September 2008 report indicating that TYC closed over 500 abuse cases without investigation (Donnelly, 2018). The 2003 Congressional approval of the Prison Rape Elimination Act (PREA) required investigations of all sexual abuse allegations and reports, demonstrating a violation of PREA requirements (Ahlin, 2019; Nielsen, 2017). Following these reports and investigations, the TYC and the Texas Juvenile Probation Commission dissolved in December 2011, resulting in the creation of the Texas Juvenile Justice Department (Cate, 2016; Donnelly, 2018).

These changes reduced the daily population of committed youth by 81% from fiscal year 2005 (4,127) to fiscal year 2019 (786) (*Texas Model Plan for Reform*, 2020). Youth population reductions in TJJD created the opportunity for change, allowing a greater chance for sustaining staff at lower staff/youth ratios; ideal for different youth populations ranging from sex offenders to violent youth (*Texas Model Plan for Reform*, 2020). The TJJD executive leadership team established the Texas Model Plan for Reform as a part of the fiscal year 2022–2023 biennium future request plans, outlining an alternative to the previous 15 years of reform in the Texas juvenile justice system (*Texas Model Plan for Reform*, 2020).

The Texas Model

On April 1, 2019, Camille Cain, TJJD Director, addressed a letter and update on the juvenile justice system strategy, known as the Texas Model, to the Honorable Greg Abbott,

Governor of Texas (*The Texas Model Plan for Reform*, 2019). The Texas Model contains design and key intervention principles with supporting strategies to address the underlying social and emotional issues contributing to youth conduct determined by TJJD. BWC use is part of a graduated response within the Texas Model's principles to meet youth and system needs (*The Texas Model Plan for Reform*, 2019). Following the report to the governor, the media criticized the proposals as mirroring past proposals, noting the previous decades' scandals, addressed above; however, media reporting acknowledged the new accountability strategy change of direct-care staff wearing BWCs (Rice, 2018). For the first time, technology could provide a video and audio observation tool. Additionally, the Texas Model strategy for TJJD calls for more effective treatment and intervention-focused care following trauma-informed care, creating an environment of safety with a protected environment of consistent daily and developmental transitions that increase predictability and perceived control (Texas Juvenile Justice Department, 2019; *Texas Model Plan for Reform*, 2020).

Texas Model Principles

Trust-Based Relational Intervention (TRBI) principles comprise the Texas Model's critical elements of structured environments and correcting principles. Reid et al. (2018) examined TBRI's origin, noting its beginning as a positive alternative to caregivers' fear-based emotions to their adopted foster children. Prior experiences and fear from the foster children created a need for an alternative approach for caregivers resulting in TBRI (Reid et al., 2018). Purvis and colleagues' 2013 research supports this, as they found children who reacted from fear-based emotions had higher levels of the stress chemical cortisol and more significant instances of behavioral events than those same children after TBRI principles. Children from hard circumstances, like foster care, can be further traumatized by fear-based emotions, making TBRI

a better alternative (Purvis et al., 2013). The basis of the Texas model comes from trauma-informed care employing TBRI principles for correction and structure for youth with very high trauma scores determined by their adverse childhood experience (ACE) assessment scores (The Texas Model: A Strategy for the Juvenile Justice System, 2019). Howard et al. (2015) reviewed the ACE survey concluding that TBRI training use with adoptive families over a 6-month period demonstrated significant global functioning improvement, a significant decrease in psychiatric symptoms, and decreased caregiver stress. Implementing TBRI incorporates empowerment through a structured environment combined with connecting principles focused on relationships and correcting principles focused on responding to behaviors with graduated response options; this is referred to as IDEAL response (Reid et al., 2018).

Training on the Texas Model

Changes in expectations from facility staff take time, so the Texas Model was rolled out facility by facility over several months, including adding a Texas Model mentor at each facility (Texas Juvenile Justice Department, 2019). Each youth development coach (YDC), dorm supervisor, facility manager, facility assistant superintendent, facility superintendent, and direct care staff member underwent Texas Model training, including TBRI training, providing alternative approaches ideal for dealing with trauma-experienced youth. TBRI focuses on a graduated set of options to improve youth behavior and make environments safer (Texas Juvenile Justice Department, 2019). Each Texas Model mentor assists in adapting the process. These graduated sets of options include levels of response for incidents consisting of playful engagement with behavioral re-dos where youth are asked questions to redirect behavior; structured engagement where the youth are provided choices in elevated situations; calming engagement when the risk of full escalation necessitates the youth be given chances for a “time-

in," or a quiet place; and protective engagements where the significant threat of violence requiring the youth be contained using approved physical intervention (Purvis et al., 2013).

BWC and the Texas Model

One of the goals for BWCs in TJJD includes monitoring youth development coaches' progress toward implementing the Texas Model principles and following agency policy (*The Texas Model Plan for Reform*, 2019). One method to track policy adherence and application of Texas Model principles comes from performance reviews available through BWC review. In this capacity, the BWC provides a monitoring approach to determine if YDCs follow TBRI's procedural and policy approach (Howard et al., 2015; Parris et al., 2015; Razuri et al., 2015; Reid et al., 2018; The Texas Model Plan for Reform, 2019). BWCs provide a tool for monitoring these practices and other procedural requirements, including PREA adherence and agency policies (Ahlin, 2019; Cate, 2016; Donnelly, 2018; Greenberg, 2019).

BWCs record events and audio, providing a record of accountability for reviewing the behavior of youth and staff related to agency policy and the principles of trust-based intervention in the Texas Model's trauma-informed care (Beales & Marsh, 2016). BWCs support the Texas Model's framework for establishing agency legitimacy and reformation by providing a technological solution for the systematic observation of how YDCs implement the Texas Model. BWCs provide a mechanism to gauge compliance with the model and where to focus additional training.

Use of BWCs in Corrections

Interest and implementation of BWCs in U.S. corrections continue to increase (Body-Worn Camera Training and Technical Assistance, 2021; Welsh-Huggins, 2021). In 2015, Lincoln County, Wisconsin implemented BWCs to document aggressive youth, crisis intervention, and

other incidents to document youth behavior (Defour, 2015). In October 2018, the Horizon Juvenile Facility in the South Bronx, New York began using 60 BWCs to document incidents, with plans to implement an additional 365 (Blau, 2018). In September 2019, Marquette County, Michigan officials issued BWCs to 35 corrections officers, and in Centre County Prison, Pennsylvania, the prison initiated a five-year contract for officers to document inmate behavior (Elwell, 2019; Nexstar Broadcasting, 2019). State-level implementation in adult corrections continues to advance in New York and Florida (Body-Worn Camera Training and Technical Assistance, 2021). The Ohio Department of Rehabilitation and Correction announced a $17 million contract award for implementation by the end of 2021 (Welsh-Huggins, 2021). TJJD is the only state-level juvenile agency fully implementing BWCs (Rice, 2018).

Research Summary

Though implementation in U.S. corrections continues, only three published studies examine the use of BWCs in corrections from New Zealand and Australia (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022). The published research supporting BWCs' implementation in corrections focuses on protecting staff, increasing accountability, reducing physical force, creating better staff confidence, supporting misconduct and external prosecution, and changing inmate behavior (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022). Dodd's (2020) and Sydes's (2020, 2022) studies are significant to understanding if officers are willing to comply with BWC policies on implementation and use and, ultimately, if there is reason to think that the organization will see measurable success in those variables most important to them. Additional correctional research studies can assist in validating the significance of BWC implementation in corrections. A research gap exists related to determining BWCs' success in meeting organizational needs in corrections and their implementation.

Similar studies related to police BWC use include officer perceptions, organizational impacts, planning considerations, and decision considerations. Existing BWC studies in policing relate to similar activities in corrections, including use of force, investigations, and clearing of allegations (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022). BWC use in U.S. corrections come from similar criteria found in existing studies, including protecting staff, increasing accountability, supporting misconduct and external prosecution, and changing inmate behavior. However, no U.S. published studies examine BWC use in corrections (Blau, 2018; Defour, 2015; Elwell, 2019; Nexstar Broadcasting, 2019).

Problem Statement

Although U.S. corrections organizations continue moving forward with BWC adoption in corrections environments (Blau, 2018; Defour, 2015; Body-Worn Camera Training and Technical Assistance, 2021; Elwell, 2019; Nexstar Broadcasting, 2019; Welsh-Huggins, 2021), only three published research studies exist related to the application of BWCs in a corrections environment (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022). The lack of research creates potential problems with BWC implementation or unintended consequences for officers and inmates (Lum et al., 2015). When executives decide to implement technological solutions like BWCs, progress from implementation depends upon officer buy-in and staff support (Guab et al., 2016; Stoughton, 2018). Positive officer support of BWCs could lead to enhanced value during implementation, while negative views might make implementation challenging and hinder the multimillion-dollar cost investment (Fan, 2018; Jennings et al., 2014). Young and Ready (2015) associate officer non-compliance with BWC policy with negative associations of officer culture and perceptions and an increased scrutiny associated with supervisor monitoring (Adams & Mastracci, 2019; Hedberg et al., 2017). Understanding staff attitudes toward BWCs and their

perceived benefits and limitations before and after implementation assists in identifying required leader and policy engagement for a better transition (Gaub et al., 2016; Snyder et al., 2019). It is crucial for agencies to regularly check in with their officers about their perceptions of BWC because perceptions and personnel can change over time.

Purpose Statement

The purpose of this study is to examine TJJD staff's perceptions of BWCs using pre-existing surveys. The pre-existing surveys follow a non-experimental, repeated cross-sectional research design exploring coaches' perceptions of BWCs. Lum et al. (2019) showed that officers wearing BWCs do not always favor the new technology, indicating technical difficulties, workload impacts, hesitation to conduct duties, cynical attitudes toward BWC use, and poor perceptions toward organizational justice. Gaub et al. (2016) determined that officer attitudes toward BWCs impacted their compliance with agency policy. Understanding TJJD staff support of BWCs indicates how the support could impact BWC usage. Examining the survey data results expands Dodd and colleagues' (2020) research by exploring the juvenile and staff view of BWCs in a state-level juvenile facility in the United States.

TJJD use of BWCs provides an opportunity to assist in restoring its relationship with the community. BWCs allow one to view staff compliance and youth behaviors to determine if the staff are, in fact, exhibiting behaviors consistent with the Texas Model and procedural justice practices. Research shows perceptions of fair procedures and fair treatment lead to fewer misconduct incidents and greater compliance (Cambell et al., 2020; Henderson et al., 2010; Howard & Wakeling, 2020). BWCs provide the technological solution for monitoring the Texas Model's implementation, but officers must comply with BWC policies. Research shows that

officers' perceptions of BWCs influence their compliance with BWC policy, and TJJD would benefit from understanding what factors relate to officer compliance.

Significance of the Study

There is a significant gap in research related to BWCs' use in corrections and juvenile justice. The peer-reviewed research related to BWCs predominantly focuses on police use. Topics range from officer perceptions, increased cooperation, leadership perceptions, effects on police organization and practice, and stakeholder perceptions (Ariel, 2016; Gaub et al., 2016; Koen et al., 2019; Smykla et al., 2015; Sousa et al., 2016; Todak et al., 2018). These studies focus on police operations with minimal research related to BWCs in a corrections environment. Multiple United States corrections agencies reportedly use or plan to use BWCs (Body-Worn Camera Training and Technical Assistance, 2021; Welsh-Huggins, 2021). Still, none of these agencies have published any research related to the implementation or use of BWCs. Each of these and other corrections agencies seeking BWC technology will benefit from this research to assist decision-makers in supporting funding BWC implementation. Published research will support greater BWC use in corrections and juvenile justice facilities (Lum et al., 2015). This research will provide the first documented use of BWCs in a juvenile environment and corrections within the U.S. and provide data to support or refute findings in police research related to officer support.

Potential Benefits for Police

BWC use in corrections and juvenile justice could result in potential benefits for police. Many police agencies operate jails, where those arrested await arraignment or trial. Study results of BWC use in corrections provide input to decision-makers looking to implement the same technology in local jails. BWCs offer better transparency and accountability to improve community legitimacy, increasing civility and citizen compliance while decreasing officer

complaints (Chapman, 2019). BWCs also provide quicker resolution of complaints and lawsuits alleging excessive force and other misconduct without witnesses by providing corroborating evidence in arrests or prosecutions (Chapman, 2019). The research focused on validating BWC use in corrections environments gives decision-makers results in similar settings. This study focuses on determining staff perceptions of how BWCs provide procedural justice, illustrating adherence to and support of BWC policy.

Potential Benefits for TJJD

Transparency and accountability apply to facility staff, and this study will highlight perceptions of how BWCs can impact their duties. Civility and compliance are in the youths' best interest. Juveniles committing offenses in confinement can acquire additional time in their length of stay. Beales and Marsh (2016) found that adult offenders knowingly being recorded reduced incidents; similar reductions in incidents by juveniles could reduce negative behaviors. Additionally, BWCs utilized within TJJD can provide training opportunities identified during the most challenging transitional times. The Texas Model is a new approach, and staff will not always get it right. BWC footage can offer both positive and negative examples that may significantly enhance training for new coaches.

Research Questions

The research questions guiding this study are:

RQ1: To what extent do Texas Juvenile Justice Department (TJJD) facility staff support the use of body-worn cameras (BWCs) within juvenile justice facilities, and how has that support changed since implementation?

RQ2: Will a person's facility of employment, age group, gender, race, education, facility type, and position category influence staff perceptions of BWCs?

Definitions

Body-worn Camera (BWC): A portable electronic recording device worn on a person that records audio and video data of the officer's law-enforcement-related encounters and activities (The Florida Legislature, 2021).

Classification: Process for determining the needs and requirements of youth ordered to confinement in a juvenile justice facility and assigning them to housing units and programs according to their needs and existing resources (Texas Juvenile Justice Department, 2017).

Classifying Offense: The offense for which a youth is classified at TJJD and is the most serious offense of the relevant offenses documented in the youth's record (Texas Juvenile Justice Department, 2017).

Committing Offense: The most severe offenses found true at the youth's most recent judicial proceeding (Texas Juvenile Justice Department, 2017).

Crisis Stabilization Unit (CSU): Specialized treatment unit for treatment of youth in need of intensive mental health services (Texas Juvenile Justice Department, 2017).

Delinquent Conduct: Defined by the Juvenile Justice Code as conduct other than a traffic offense that violates a Texas penal law and is punishable by imprisonment or confinement in jail; or a violation of a reasonable and lawful order that a juvenile court entered. In general, juvenile delinquency under Texas law results from either violation of the Texas Penal Code or violation of probation conditions (Texas Juvenile Justice Department, 2017).

Determinate Sentenced Offender (DSO): A youth committed to TJJD with a determinate sentence of up to 40 years. The sentence may be completed in the adult prison system, depending on the youth's behavior while at TJJD (Texas Juvenile Justice Department, 2017).

Determinate Sentencing: A blended sentencing system for the most severe offenses that provides the possibility of juvenile court transfer at age 16 from TJJD to the adult system to complete their sentence (Texas Juvenile Justice Department, 2017).

General Administrative Policies (GAP): Administrative policies that detail expectations related to TJJD staff and facilities (Texas Juvenile Justice Department, 2017).

General Offender: A nonviolent offender (Texas Juvenile Justice Department, 2017).

Indeterminate Sentencing: Commits a youth to TJJD for an indefinite period, not to exceed their 19th birthday (Texas Juvenile Justice Department, 2017).

Individual Case Plan (ICP): Youth's individualized plan for treatment and education, based on their specific strengths and risks (Texas Juvenile Justice Department, 2017).

Juvenile Probation: A mechanism that juvenile justice agencies use to sanction juveniles adjudicated in court to divert offender status or first-time juvenile offenders from the court system. Some communities may use probation to monitor at-risk youth informally and prevent their progression into more severe problem behavior (Texas Juvenile Justice Department, 2017).

Mental health practitioners: A mental health professional permitted by law, education, credentials, and experience to evaluate and care for patients within the scope of their professional practice (Texas Juvenile Justice Department, 2017).

Minimum Length of Stay (MLOS): The minimum period an indeterminate sentenced youth must stay in TJJD established by TJJD policy (Texas Juvenile Justice Department, 2017).

Minimum Period of Confinement (MPC): The minimum period a determinate sentenced youth must be held in a TJJD facility before being eligible for parole, established in state law (Texas Juvenile Justice Department, 2017).

Office of Inspector General (OIG): An independent law enforcement division of the Texas Juvenile Justice Department to investigate criminal allegations involving TJJD and TJJD interests. OIG was created in June 2007 and is staffed by law enforcement officers who investigate criminal acts committed by TJJD staff or youth and file criminal charges when appropriate (Texas Juvenile Justice Department, 2017).

Office of Independent Ombudsman (OIO): A state agency established to investigate, evaluate, and secure children's rights committed to the commission, including a child released under supervision before final discharge (Texas Juvenile Justice Department, 2017).

Parole: The TJJD supervision period begins after release from a residential program and ends with discharge and aftercare (Texas Juvenile Justice Department, 2017).

Probation: One of the dispositional options available to a juvenile court judge after a youth is adjudicated as delinquent, providing the option of a community-based correction that presents the youth with a set of rules and regulations and addresses the youth and the family's needs (Texas Juvenile Justice Department, 2017).

Secure Facility: A facility designed and operated to ensure that all entrances and exits are under the exclusive control of the facility's staff, thereby not allowing youth to leave the facility unsupervised or without permission (Texas Juvenile Justice Department, 2017).

Sentenced Offender: A youth committed to TJJD with a determinate sentence of up to 40 years for offenses specified in section 54.04(d)(3) or 54.05(f) of the Family Code. The sentence may be completed in the adult prison system, depending on the youth's behavior while at TJJD (Texas Juvenile Justice Department, 2017).

Substantiated allegation: An allegation investigated and determined to have occurred (*Prison Rape Elimination Act (PREA) Juvenile Facility Standards*, 2012).

Unfounded allegation: An allegation that was investigated and determined not to have occurred (*Prison Rape Elimination Act (PREA) Juvenile Facility Standards*, 2012).

Unsubstantiated allegation: An allegation that was investigated and produced insufficient evidence to determine whether or not the event occurred (*Prison Rape Elimination Act (PREA) Juvenile Facility Standards*, 2012).

Sexual abuse: Includes sexual abuse of an inmate, detainee, or resident by another inmate, detainee, or resident, or sexual abuse of an inmate, detainee, or resident by a staff member, contractor, or volunteer (*Prison Rape Elimination Act (PREA) Juvenile Facility Standards*, 2012).

Youth Development Coach: Provides supervision and direct care for youth in a residential correctional facility to help youth by using the appropriate intervention methods in response to behavioral issues. Maintains a consistent effort to ensure safe environments and employs security measures when youth, staff, or others are in danger. Interacts and engages with youth to maintain the appropriate structure and exercise understanding of brain development in youth with complex trauma. Maintains healthy relationships and boundaries with youth and consistently recognizes progress and good choices (Texas Juvenile Justice Department, 2019).

CHAPTER TWO: LITERATURE REVIEW

Overview

This literature review examines how procedural justice contributes to legitimacy through body-worn cameras (BWCs) in policing and how legitimacy can extend to corrections and the Texas juvenile justice system. The literature review examines the few studies of BWCs in corrections and police studies applicable to implementation and activities in corrections. Few corrections organizations employ BWCs, and only three peer-reviewed academic sources focus on BWCs in corrections, creating a wide knowledge gap (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022). Police studies related to implementation include officer attitudes, officer perceptions, organizational impacts, planning considerations, and decision considerations applicable to corrections. Additionally, implementation guides from the Department of Justice and academic reviews related to implementation in many police agencies provide worthwhile observations and recommendations relevant to corrections (White et al., 2018).

This literature review examines BWCs' role in implementing the Texas Model and trauma-informed care using trust-based relationship intervention (TBRI). TJJD's strategic goals focus on implementing the Texas Model by establishing a foundation in trauma-informed care following TBRI principles requiring staff implementation (*The Texas Model Plan for Reform*, 2019). The former role of juvenile corrections officers (JCOs) required oversight and management of youth behavior, but this changed with their name change to youth development coaches (YDCs). In addition to YDCs, dorm supervisors are assigned a youth dorm and manage the YDCs' implementation of policies related to the dorms (*TJJD - Dorm Supervisor I - Team Leader-State Services (GNS) - 24258*, 2022). Facility managers include an operations manager, who manages daily campus activities, and a youth safety officer, who focuses on suicide

prevention and adherence to the Prison Rape Elimination Act (PREA). The campus organizational leaders are the assistant superintendent and superintendent, who implement TJJD policy, make decisions, and solve each campus' problems. BWCs serve as a technological tool for assessing the transition's success in secure facilities across the state. BWCs provide a tool for monitoring staff procedural requirements, including adherence to PREA and agency policies from a procedural justice theoretical perspective.

Methods for Searching

The search for relevant and current sources supporting this literature review included various methods following a snowball methodology using the Jerry Falwell Library and Google Scholar with support from Boston University Library and Sam Houston State University Library. The initial search from the Jerry Falwell Library, using the anything option for the phrase "body-worn cameras," yielded 752 journal article results within the last five years. Narrowing the search to ["body-worn cameras" AND juvenile] yielded 66 journal articles; however, none included information on BWC use related to juvenile justice. Searching for ["body-worn cameras" AND corrections] identified 58 journal article results, with two articles pertaining to BWC use in corrections in Australia and one from New Zealand. Additional searches from government websites provided additional publications, abstracts, and links to studies evaluated by the National Institute of Justice's CrimeSolutions.gov site related to police use.

A search for "procedural justice" yielded over 8,118 sources, narrowed by adding the term ["procedural justice" AND "body-worn camera"], generating 163 sources within the last five years. A library search produced five peer-reviewed articles published by Purvis related to TBRI. The basis of the Texas Model comes from TBRI, so the next search focused on academic sources related to "trust-based relational intervention," providing 39 sources narrowed to five directly

associated with trauma-informed TBRI care. A search for [“trauma-informed care” AND juvenile] yielded 493, narrowed to 35 sources directly associated with trauma-informed care and juveniles. The Purvis Institute’s sources identified four peer-reviewed sources highlighting the institute’s foundation. A search on the TJJD website identifies additional information about the Texas Model, providing a summary of the youth, adverse childhood experiences, trauma-informed corrections using TBRI, and roles and responsibilities of coaches, case managers, mental health staff, and other supporters.

Legitimacy Issues in the Texas Youth Commission

This section provides context for the legitimacy issues experienced working with juveniles and the means sought to recover that legitimacy within the community. Cate (2016) documented the Texas Ranger investigation from 2005 concerning the Assistant Superintendent’s sexual assault of six boys at the Pyote facility in West Texas. The public allegations of sexual abuse at TYC’s West Texas state school motivated others to reveal sexual abuse allegations at other juvenile facilities in the state (Cate, 2016). The media’s attention on what appeared to be a pattern of abuse in juvenile facilities criticized the legitimacy of juvenile justice in Texas, causing then-Governor Rick Perry to call for reform (Cate, 2016). The Office of the Independent Ombudsman’s resulting investigation revealed 500 cases with no investigation record (Donnelly, 2018). State Bill 103 eliminated youth commitment to TYC for misdemeanor offenses and increased funding for county probation and community-based programs, while Senate Bill 653 merged the Texas Juvenile Probation Commission and TYC into the Texas Juvenile Justice Department (TJJD) (Cate, 2016).

Further efforts to account for sexual abuse in TJJD came with installing an $18 million closed-circuit television (CCTV) surveillance system within existing facilities, even when

observers never operated the systems on a 24/7 basis (Cate, 2016). These surveillance cameras provided video coverage of each of the 93 facilities based on the 2007 legislation from State Bill 103, now reduced to the existing five secure facilities and six halfway houses (Cate, 2016). These systems provided the only visual evidence of events until BWCs' introduction at the beginning of 2018 (*The Texas Model Plan for Reform*, 2019). CCTV systems and BWCs contribute to staff and youth accountability, leading to greater legitimacy; however, BWCs provide more profound contributions to accountability when staff support BWCs and follow procedural justice standards prescribed by TJJD's Texas Model practices.

CCTV Ineffectiveness

The first technological solution to establish legitimacy came with CCTV; however, BWCs provide greater advantages to the gaps created by CCTVs alone. CCTVs were traditionally used to establish legitimacy, but Allard (2005) identified four drawbacks of CCTV in prisons: displacement, fading effect, monitoring limitations, and recording of incidents and civil rights violations. CCTV displaces incidents to other locations with blind spots or areas less monitored (Allard, 2005). CCTV's fading effect refers to the loss of deterrent effects over time, where the initial impact of camera installation slowly loses impact (Allard, 2005). The limitations on monitoring and recording refer to the lack of personnel to monitor camera footage and limitations of fog, lighting, and blind spots, making CCTV a static system used when incidents come to light in alternative ways (Allard, 2005). Finally, civil rights violations vary by jurisdiction, but an undetected invasion of privacy and voyeurism exists (Allard, 2005). CCTV remains hampered by poor picture quality and lack of sound (Allard, 2005; Beales & Marsh, 2016). Beales and Marsh (2016) identify the fading effect that Allard (2005) addressed but advocate that BWCs negate this

effect by transferring the multiple-person surveillance blended environment into a personalized recording environment, creating greater deterrence.

CCTV as a System

Closed-circuit television systems require interconnected systems with quality cameras, good bandwidth, fiber optic cables, electric power, proper camera placement, and a simplistic schematic for identifying the right camera (Piza, 2018). Once installed, damaged or inoperable systems take time to replace, leaving vulnerable areas with no video coverage, meaning system placement does not adequately cover the area, providing no viable data in a video search (Piza, 2018). Failure of one of the multiple systems required for CCTVs to function can result in lost evidence (Piza, 2018). The most substantial impact of CCTV coverage comes when combined with active monitoring, instead of static cameras accessed when needed, hoping they are working (Piza et al., 2019). Future CCTV reliance will depend on computer vision technology (CVT) and applying mathematical algorithms to CCTV video footage for automated detection, allowing the user to focus on response and prevention instead of static monitoring (Piza et al., 2019). Unlike the CCTV system's complexity, BWCs rely on fewer interrelated systems, creating a greater likelihood of recording a direct incident (Piza, 2018).

Filling the CCTV Gap

The U.S. District Court for the Northern District of California recently acknowledged the ineffectiveness of CCTV cameras alone in a recent court case, noting the need for BWCs to assist in filling the gap of CCTV systems alone (*Armstrong v. Newsom*, 2021). Because the U.S. District Court for the Northern District of California is a federal court creating precedents applicable to every state, jurisdictions considering the implementation of CCTV or BWCs should weigh the decision results when considering investments to support video surveillance. The district judge

ordered the installation of surveillance cameras and implementation of BWCs at five state prison facilities over the objection of the state's expert that surveillance cameras performed superior to BWCs to reduce violations of disabled inmates' rights (*Armstrong v. Newsom*, 2021). The judge in Armstrong v. Newsom (2021) determined that BWCs improve disabled inmates' rights by strengthening staff misconduct investigations, increasing officer and inmate safety, lowering the use of force incidents, and improving investigations, increasingly in conjunction with surveillance cameras. A direct example of BWC use is their use to support the Prison Rape Elimination Act.

Prison Rape Elimination Act

The 2003 passage of the Prison Rape Elimination Act (PREA) established Department of Justice standards for sex abuse in adult and juvenile correctional facilities, advocating zero tolerance for prison rape (Ahlin, 2019; Greenberg, 2019; Nielsen, 2017). Ahlin (2019) conducted an integrated literature review advocating for specific treatment of juveniles in custody. PREA issues continue in adult and juvenile facilities requiring investigations of allegations and reports showing actions taken for each event (Ahlin, 2019; Nielsen, 2017). Anytime an allegation comes against staff, they require separation from youth pending investigation. BWCs allow investigators to provide documented evidence to support or refute investigations; unlike CCTV footage, BWCs record the officer's perspective, providing sound and better context (Dodd et al., 2020). BWCs potentially save days or weeks that staff require separation from coach duties, potentially influencing officer perceptions of BWCs as coaches associating BWC use with greater professional protection. Sydes et al. (2019) associated reduced threats of false allegations or complaints with professional safety, and 79% agreed that BWCs would protect officers against false allegations.

The Department of Justice (DOJ) requires corrections facilities to track adult and juvenile sexual assault allegations based on the PREA requirements, requiring an investigation of all allegations (Greenberg, 2009). DOJ reports indicate a higher victimization rate for juveniles than adults, with up to 10% of youth in juvenile detention centers and 2% of jails reporting abuse (Ahlin, 2019). The Supreme Court determined in Roper v. Simmons that juveniles have a diminished capacity due to their immaturity, transient character, and reduced culpability, leading to an increased need for guardianship while in detention (*Roper v. Simmons*, 2005). Corrections employees in contact with youth require PREA training before interacting with youth, with refresher training every two years (Medina, 2018). Still, with zero-tolerance policies and training mandates, states struggle with maintaining PREA standards (Medina, 2018).

PREA and Video Surveillance

With the advent of PREA, video surveillance systems provided a mechanism to assist with compliance standards, requiring additional cameras. After PREA became law, Washington passed Senate Bill 5907, requiring video monitoring cameras in correctional facilities in the Washington State Department of Corrections (WSDOC) (*Security Video System Standards for Correctional Facilities*, 2014). WSDOC facilities use cameras in the place of direct observation to aid in allegation investigations (*Security Video System Standards for Correctional Facilities*, 2014). Findings showed that cameras are placed strategically for specialized monitoring and as needed for various purposes; however, the camera systems have little active monitoring and no staff dedicated to video monitoring (*Security Video System Standards for Correctional Facilities*, 2014). The estimated cost for the Washington system to meet recommended state security video standards showed an estimate in 2011 of $49.9 million (*Security Video System Standards for Correctional Facilities*, 2014).

Making CCTV more relevant would require active surveillance through computer technology, augmenting the system using new technology (Allard, 2005; Beales & Marsh, 2016; Debus-Sherrill et al., 2017; Gannoni et al., 2017). Allard (2005) and Beales and Marsh (2016) identified CCTV's lack of sound as a limitation unobserved with BWCs. CCTV systems provide surveillance for TJJD but lack the audio capability available through BWC direct observation.

BWCs and Corrections

The call for BWCs in corrections comes from the desire for a tool to make the prison environment safer and provide a means to enhance documentation (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022). The available research related to BWCs and corrections identifies BWC implementation's advantages in prison settings, like the ability to document the use of force, complaints, and PREA incidents (Beales & Marsh, 2016; Dodd et al., 2020; Greenberg, 2019; Sydes et al., 2020, 2022). Additionally, research shows decreased aggression when inmates perceive observation, increasing accountability and transparency (Beales & Marsh, 2016; Greenberg, 2019). Research also shows that adopting BWCs increases officer perceptions of protection from threats of false allegations (Dodd et al., 2020; Sydes et al., 2020, 2022).

Corrections Peer-Reviewed Sources

The peer-reviewed sources on the use of BWCs in corrections come from studies in New Zealand and Australia. Beales and Marsh (2016) conducted a 6-month pilot study in two high-security pods consisting of 300 prisoners and 30 staff, recording 26 hours of body camera footage and documenting 157 incidents (Beales & Marsh, 2016). Findings indicated a reduced likelihood of physical force, greater staff confidence, support for internal misconduct and external prosecution based on video evidence, the ability to modify behavior, and professional safety protecting corrections officers from false accusations and complaints (Beales & Marsh, 2016).

Dodd et al. (2020) provided the results of a mixed-methods study of correctional officers' views of BWC implementation in prisons using the results from a statewide survey in Queensland, Australia. Officers acknowledged protective benefits for inmates and staff related to accountability but showed concern for performance monitoring, requiring clarification through policy and education (Dodd et al., 2020). Sydes et al. (2020, 2022) examined correctional officers' BWC use in Queensland, Australia, following a mixed-method survey and interview data design to assess correctional officers' feelings of safety with BWCs in environments with higher violence rates. Findings showed perceptions of protection from threats of false allegations but not feelings of safety or changes in prisoner courtesy (Sydes et al., 2020, 2022).

BWCs and Corrections Summary

Published studies on BWC use in corrections focus on protecting staff, increasing accountability, reducing physical force, creating better staff confidence, supporting misconduct and external prosecution, and changing inmate behavior (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022). Researchers disagree on the physical safety impact. The New Zealand research using a smaller population of 300 inmates and 30 staff on two pods generated more significant impacts on reducing the physical force when compared to the 150 BWCs used across 12 high-security prisons in Queensland (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022). Three factors account for the differences in findings. First are the population differences. But, more importantly, in the New Zealand study, the findings came from an analysis of incidents, while the Queensland study relied upon survey data, identifying corrections officers' feelings of physical safety (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022).

Sydes and colleagues' (2020, 2022) and Dodd and colleagues' (2020) findings show corrections officers' support of BWCs based on survey results and follow-up interviews similar to

the findings related to protections from allegations, supporting Gaub and colleagues' (2016) work. Gaub et al. (2016) identified a change in officer skepticism resulting from cleared complaint allegations. Additionally, Lum and colleagues' (2019) conclusions on BWC protection against accusations of wrongdoing in police research support Sydes and colleagues' research in corrections.

Both Sydes and colleagues' (2020, 2022) and Dodd and colleagues' (2020) studies used surveys administered using Qualtrics and emailed to all employed custodial officers, with a response rate of 22% for both Sydes et al. (2020, 2022) and Dodd et al. (2020). Sydes et al. (2020, 2022) and Dodd et al. (2020) developed their survey questions from the police surveys developed by Gaub et al. (2016), Smykla et al. (2016), and Tankebe and Ariel (2016). Taking a similar approach, this study examines responses from an existing TJJD survey developed from the same sources. This study examines the TJJD study results with similar response rates. Still, it seeks to examine those responses using the same survey questions over time, following a repeated cross-sectional design aimed at identifying changes in BWC support over time (Bachman & Schutt, 2019). Relying on a single survey creates a limitation by inadequately accounting for the variation in past feelings or concerns before full BWC implementation (Bachman & Schutt, 2019).

BWCs and Police Legitimacy

Koper and Lum (2020) wrote the introduction for a special issue of *Criminology & Public Policy* that addressed the death of George Floyd after a call for service response from the Minneapolis, Minnesota police, noting continued assertions of unjust police killings in other cities. Examples of contentious applications of force resulting in death include incidents involving Trayvon Martin, Michael Brown, Eric Garner, and Freddie Gray in 2014 and 2015. These incidents provided public and political motivation for implementing BWCs for increased

accountability, reduced use of force, reduced inequality, and improved community relations (Graham et al., 2019; Jennings et al., 2015; Lum et al., 2019, p. 95; Nix et al., 2020; Wallace et al., 2018; Wooditch et al., 2020). With policy development assistance from the IACP in 2014 and a $20 million-dollar commitment from the president in 2015 (increased to $75 million that year), BWC implementation by U.S. law enforcement agencies grew significantly (Adams & Mastracci, 2019; Braga et al., 2017; Crow et al., 2017; Koslicki, 2019; Lum et al., 2019; Malm, 2019; Maskaly et al., 2017; Nowacki & Willits, 2016; White, 2019; Wright & Houston, 2021). BWCs' acceptance in policing as a path to legitimacy comes from greater accountability and citizen support, providing similar opportunities in corrections.

Police Legitimacy and the Application to Corrections

Several BWC studies in policing provide applicable and worthwhile findings to corrections. Early documented research by Ariel et al. (2016), Lum et al. (2019) and Malm (2019) outline the evolution of BWC publications from five published works in 2014 to over 70 published in 2019 with topics on officer behavior, officer attitudes, citizen behavior, community attitudes, impact on investigations, and organizational impacts. The police BWC studies applicable to this study are those studies that demonstrate BWC's ability to establish credibility and demonstrate that police perception of BWCs influence how they are used. Understanding these studies provides a better insight into the research gaps on BWC use in corrections and a repeatable research design examining BWCs in similar areas. Studies supporting corrections research include officer perceptions of BWCs, organizational impacts of BWC implementation, BWCs' impact on use of force, and BWCs' impact on investigations (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022). Each of these topics demonstrate areas influencing

officer support of BWCs in corrections and their adherence to policy (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022).

Officer Perceptions Toward BWCs

Agencies must be aware of officer perceptions of BWCs before and after implementation because their perceptions impact officers' compliance. Lum et al. (2019) and Malm (2019) document 32 studies in a meta-analysis focused on officer attitudes related to BWC implementation perceptions. Regardless of pre-conceived attitudes toward BWCs, once officers began using them, their feelings ranked as positive or neutral or became positive in post-surveys after using them (Ellis et al., 2015; Gaub et al., 2018; Grossmith et al., 2015; Jennings et al., 2015; Koen, 2016; Smykla et al., 2015; White et al., 2018). Gaub et al. (2016) surveyed 106 Phoenix, Arizona police, 205 Temple, Arizona police, and 153 Spokane, Washington police officers randomly selected from those participating in BWC trials. The officers completed surveys four times before and after BWC deployment, completing eight surveys consisting of 33 questions on BWCs, and completing reports, capturing evidence, ease of use, and general perceptions (Gaub et al., 2016). Findings representative of the average of all surveys indicated that Phoenix officers had negative perceptions, Temple officers had positive receptions, and Spokane officers had mixed perceptions (Gaub et al., 2016).

White et al. (2018) examined officer perceptions in Temple, Arizona related to adherence to the Bureau of Justice Assistance (BJA) Law Enforcement Implementation checklist, a best-practices guide geared toward practical BWC implementation. The guide includes over 24 steps divided into developing a plan, forming a working group, developing policy, procuring technology, communicating with stakeholders, and following a phased roll-out (White et al., 2018). The study used survey results developed by Katz et al. (2015) using a standard Likert scale

administered as part of a 6-month randomized controlled trial, two before and six after the start of the trial (White et al., 2018). White et al. (2018) found that officers indicated support of BWCs before and after implementation, likely due to the difference in implementation and greater notoriety of BWCs compared to Gaub's (2016) Phoenix study.

Both studies provide examples of survey techniques for examining officer perceptions of BWCs and the importance of following an implementation process, including clear communication. Gaub et al. (2016) identified the BWC implementation process, agency policies, and officer experiences as factors impacting their views on BWCs. The program officers' attitudes were determinate factors if officers would comply with agency policy. White et al. (2018) identified the importance of a clear policy related to supervisory review of BWC footage, providing clear communication about the review process. Clear communication about the supervisor review process in Temple satisfied officers' third-order fears of open monitoring; however, other studies show increased fears in officers' feelings toward professional discretion (White et al., 2018). The fear of increased monitoring resulted in decreased compliance with activation policies (Adams & Mastracci, 2019; Hedberg et al., 2017). Fan (2018) discussed officer perceptions of supervisor reviews, resulting in police unions negotiating for supervisor limitations on openly viewing BWC videos, fearing unwarranted employee surveillance creating potential harassment for minor issues. Snyder et al. (2019) surveyed two southern police departments for pre- and post-implementation perceptions of BWCs, differentiating between officers and supervisors with increased support following implementation. Surveys showed fewer negative views among supervisors post-implementation, with considerably greater overall support for supervisors over time (Snyder et al., 2019).

BWC Perceptions in Corrections

Sydes et al. (2020) conducted post-implementation surveys to determine correctional officer perceptions of how BWCs improve physical and professional safety in 19 prisons in Queensland, Australia. Results on feelings of physical safety showed mixed results, but a majority agreed that BWCs increased professional safety against false allegations and accurate depictions of officer and prisoner interactions (Sydes et al., 2020, 2022). Dodd et al. (2020) sought to determine if corrections officers supported BWC use in prisons in the same Queensland, Australia prisons with 548 responses out of 2,500 corrections officers, resulting in a 22% response rate. Corrections officers showed concern over BWC use for performance monitoring with punishments and increased work stress, indicating the need for prison management implementation plans focusing on transparent policy (Dodd et al., 2020). Though female officers supported BWCs more than males, neither age nor education created distinguishing support factors, with extensive support for BWCs from corrections officers finding them necessary with protective benefits for officers and inmates (Dodd et al., 2020).

This study attempts to determine the extent of TJJD staff support using BWCs within juvenile justice facilities and how that support changes over time. Staff support of BWCs determines the program's success based on staff adherence to activation policies requiring camera use (Dodd et al., 2020; Gaub et al., 2016). The better organizations integrate stakeholders and officers into the BWC integration process, the more they will comply with agency policy regarding their use and, by extension, allow accountability leading to greater legitimacy (Gaub et al., 2016). No published studies review these factors for corrections outside Australia, and none are specific to juvenile justice, identifying an existing gap in research that this study can answer.

Organizational Impacts of BWC Implementation

Successful implementation of a BWC program requires a careful organizational approach. Lum et al. (2019) reviewed publications on BWC impacts on organizations finding that proponents focused on training improvements, accountability, and supervision, while skeptics pointed to cost, the tension between officers and supervisors, and drastic changes in police culture. White et al. (2018) indicated a need for careful implementation considerations to avoid the risk of organizational resource losses, unneeded costs, low device use, or damaged relationships with stakeholders and practitioners. Established BWC implementation guides and checklists provide organizations with known issues to account for through detailed planning and systematic implementation (White et al., 2018). Organizations instituting BWCs require system activation and deactivation policy considerations, supervisor review responsibilities, officer review, and discretionary footage release (Stoughton, 2018). White et al. (2018) emphasized the importance of clear communication with stakeholders, executives, and staff due to the significant resources required to plan, implement, and manage a BWC program.

Lum and colleagues' (2019) research findings indicated that the level of training officers receive impacts their support for BWC systems. The more experience officers gain with BWCs, the more they identify their value for protection against false allegations (Lum et al., 2019). Perhaps more importantly, organizational concerns should include giving officers a voice in the process of implementing new technology through inquiries and making decisions, leading to better implementation results and greater leader trust (Hedberg et al., 2017; Katz et al., 2015; Kyle & White, 2017; Wallace et al., 2018). The advent of new programs introduces implementation vulnerabilities. However, when organizational leaders include direct supervisors and officers in the implementation process, their levels of support for BWCs will be more

significant, and they will be more likely to follow policies for the use of the systems (Malm, 2019).

BWC Implementation Recommendations

The Department of Justice (DOJ) published a guide for implementing BWCs with recommendations and lessons learned focused on police agency implementation through Community Oriented Policing Services (Miller et al., 2014). A similar guide for implementation within a corrections environment does not exist; however, an analysis of the guide provides applicable considerations for corrections. Corrections organizations implementing BWC programs should consider the policy recommendations identified within the guide, including specifications of who uses BWCs, the circumstances requiring BWC activation, the use of privately-owned BWC systems, and the physical wearing of the system (Miller et al., 2014). The guide was designed for police implementation, so corrections organizations must adapt the guidelines applicable to their environments. The guide specifies a policy for activation related to calls for service and on-duty activities; a corrections environment could include an 8- to 12-hour shift with constant inmate contact (Miller et al., 2014). The guide recommends policy-defining circumstances where recordings are required and the process for documentation (Miller et al., 2014). Additionally, the guide recommends clear guidance on the prohibition of recordings (Miller et al., 2014). The guide suggests administrative procedures for downloading and storage, recorded data access and review, training requirements, and policy and program evaluation (Miller et al., 2014).

Miller et al. (2014) recommend focusing on connecting with staff through agency leadership to address the goals and benefits of the program and address officer concerns. Effective program implementation includes briefings, roll calls, and meetings to communicate the agency's

program and establishing an implementation team with broad representation (Miller et al., 2014). Successful agency implementation includes identifying champions for the program who identify BWCs as a tool for reducing internal investigations (Miller et al., 2014).

TJJD policy guideline comparisons. The TJJD policy addresses many of these areas related to BWC usage. Miller et al. (2014) indicate in the DOJ guide a need to identify who is assigned or allowed to wear BWCs; TJJD policy delegates this to superintendents for issuing and usage (TJJD, 2018). The DOJ guide recommends the prohibition of privately-owned BWCs on duty, and the TJJD policy forbids using personal video recorders (Miller et al., 2014; TJJD, 2018). The DOJ guide recommends specifications on the wear of BWCs; TJJD policy requires BWCs to be mounted on the upper chest of the shirt or jacket in the youth development coach's line of sight or on the belt with superintendent authorization (Miller et al., 2014; TJJD, 2018). The DOJ guide recommends a policy specifying articulation on camera and in writing when officers fail to record agency-required activities; TJJD policy defines verbal requirements upon deactivation of BWCs, including name, post, location, and reason for deactivation (Miller et al., 2014; TJJD, 2018). The DOJ guide focuses on police officer requirements for activations for calls for service, law enforcement encounters, and on-duty activities, but these activities differ significantly within TJJD's daily facility environment (Miller et al., 2014; TJJD, 2018). TJJD policy requires BWC activation to occur at the beginning and end of the shift unless specifically allowed to deactivate the BWC (2014; TJJD, 2018). TJJD defines authorized deactivation of BWCs for restroom breaks, approved work breaks with no youth in the area, escorting youth during medical treatment, supervising a treatment group, escorting youth off the facility, or instructed to deactivate by an investigator (TJJD, 2018). TJJD policy also requires that BWCs are

detached from their mount and placed on the floor during searches where youth are likely to be in a state of undress (TJJD, 2018).

TJJD addresses the DOJ guide's suggested administrative procedures for downloading and storage, recorded data access and review, and training requirements (Miller et al., 2014). The TJJD policy defines local inventory management, storage, data retention, copying of BWC footage, access to data, and oversight (TJJD, 2018). The policy requires the superintendent at each facility to designate a BWC administrator to assign unique numbers, assignments of BWCs, and maintenance (TJJD, 2018). The agency data retention policy sets a 90-day automatic deletion of records unless designated for longer retention for criminal or administrative investigations, use of force reviews, critical incident reviews, training examples, youth due process hearings, employee or youth grievances, employee discipline, public information requests, legal claims or litigation, audits, or other purposes approved by the executive director, chief inspector general, deputy director for state services, or general counsel (TJJD, 2018). The policy defines access to data with designated request forms and approval requirements (TJJD, 2018). The oversight of the program establishes responsibilities for the superintendents, the director of secure facility operations, and the administrative duty officer (TJJD, 2018).

Areas lacking TJJD policy guidance. The area recommended by the DOJ guide but not addressed by TJJD's policy is the program evaluation section suggesting the collection of statistical data, analysis of financial impacts, and periodic review of BWC policy and procedure (Miller et al., 2014). The companies providing BWCs support statistical analysis of BWC data for police agencies and management provide sophisticated performance workflows with specific views for each supervisory level for tracking metrics and compliance to policy (*Axon performance overview*, n.d.). These same sophisticated workflows and automated dashboards do

not exist for corrections, making it challenging to track compliance and identify those not adhering to agency policy. The dashboards and automated processes available for police come from formulas developed by each BWC company tracking calls for service and self-activations of BWC systems (*Axon performance overview*, n.d.). BWCs used in corrections for 8- to 12-hour shifts lack these clearly defined markers for events that allow the police dashboards and performance tracking. Corrections agencies must identify how they will match employees to shifts and with designated checks to monitor compliance. Each BWC vendor provides varying ways to access and track system information. Still, those found identifying metric tracking focus on police usage, requiring corrections agencies to define how they will provide statistical tracking.

Use of Force and BWCs

Between 2013 and 2018, 16 studies addressed the impact on officers' use of force following BWC implementation, revealing half with reductions in use of force (Lum et al., 2019; Malm, 2019). The results showed five studies with significant decreases, three with decreases, and the remaining showing no impact (Lum et al., 2019; Malm, 2019). Jennings et al. (2016) reviewed 60 BWCs worn by officers in the Tampa Police Department in Florida. The study reviewed use of force responses over 12 months using a propensity score matching 60 officers without BWCs related to the frequency of use of force over 12 months of officers with BWCs, showing an 8.4% reduction in the mean number of use of force responses, equating to a reduction of 250 per year for the organization (Jennings et al., 2016). Use of force events happen in corrections facilities requiring officers to apply force to given situations. As agencies implement BWCs, comparative corrections research could provide valuable information for decision-makers considering implementation in correctional facilities.

Beales and Marsh (2016) undertook their research with the idea that BWCs would enhance the safety of prison staff by reducing confrontations in the maximum-security unit of Auckland Prison with a 15 to 20% reduction in incidents. Sydes et al. (2020, 2022) and Dodd et al. (2020) undertook studies on a larger scale where 19 prisons in Queensland, Australia implemented BWC systems. Research by Sydes et al. (2020, 2022) and Dodd et al. (2020) resulted in survey data showing less support for personal safety and more for professional safety. Sydes et al. (2020) focused on how correctional officers perceive their safety with BWCs, while Dodd et al. (2020) focused on correctional officer support of BWCs. These studies addressed physical violence but did not specify the mechanics associated with the use of force found in police studies examining how BWC use reduced police use of force levels (Ariel et al., 2015; Braga et al., 2017; Jennings et al., 2015). Similar BWC studies on corrections officers and inmates could provide additional information specific to the application in a corrections environment. Current research points to success in protecting corrections officers against professional safety or allegations from inmates (Sydes et al., 2020, 2022).

BWC Impact on Investigations and Prosecution

Officer BWC use creates better opportunities for supporting investigations, generating higher conviction rates and more significant evidentiary value (Ellis et al., 2015; Morrow et al., 2016; Pickering, 2020). Lum et al. (2019) and Malm (2019) conducted a meta-analysis revealing seven studies reviewing BWCs' impact on criminal investigations, noting only two followed a randomized control trial (RCT). These RCTs showed one study with significantly increased case outcomes of criminal investigations, one with increased outcomes of criminal investigations, and five with improvements in criminal investigations. Ellis et al. (2015) determined prosecutors' ability to visualize the encounter at a crime scene provided a new perspective on BWCs, leading

to higher charge rates in England and Wales. Fan (2017), Goodall (2007), and White (2014) indicated BWCs provide evidence for improved case processing and outcomes by capturing the demeanor, statements, and behavior of victims and offenders, providing an opportunity to contextualize events in real-time. The limitations of BWCs make investigations challenging. Schaefer et al. (2022) describe the technical limitations of transforming the three-dimensional world into a two-dimensional recording, including camera direction and sound limits that create obstructional impairments. The single direction of the camera sometimes fails to capture facial expressions and nonverbal cues, and microphones capture what the wearer says; however, they do not always catch everyone else, often impacted by wind, music, traffic, or other background noises (Schaefer et al., 2022).

Morrow et al. (2016) examined BWC use for improving prosecution for officer response to intimate partner violence incidents where the first officer on the scene often records information not admissible in court due to hearsay evidence. BWCs provide a visual and aural glimpse into the first responding officer's experiences, increasing the likelihood of prosecutor inclusion and prosecution (Morrow et al., 2016). The study showed a significant increase in improved case outcomes and how BWCs provided the additional context prosecutors need to go before the court, increasing evidence-based prosecutions (Morrow et al., 2016). Pickering (2020) determined that officer perceptions reveal ongoing BWC use results in a higher evidentiary standard because of the combination of video evidence and officer testimony weighs higher than officer testimony alone.

Merola et al. (2016) randomly surveyed 1000 prosecutor agencies selected from the National District Attorney's Association (NDAA) directory, consisting of 2,330 state prosecutors' offices. Of those surveyed, 42.1% of prosecutors indicated they had used BWC evidence footage

for over one year; however, one-fifth indicated working with BWC evidence for less than one month (Merola et al., 2016). With US State courts processing up to 15 million criminal cases annually with the potential to "implicate or exonerate," the increased use of BWC evidence in court proceedings provides better opportunities to support BWC evidence in corrections (*State court caseload digest: 2018 data*, 2020; White et al., 2019, p. 9). Most prosecutors strongly supported BWC evidence, noting better witness preparation, but the majority also indicated increased burdens in case preparation time and the discovery process (Merola et al., 2016). Prosecutors identified the need for better infrastructure and technology for viewing and displaying video evidence, showing concern over logistical issues in obtaining and redacting evidence creating delays in case processing (Merola et al., 2016). Increasingly, as BWC evidence becomes more prevalent, prosecutors expressed concern over the negative influences on decision-making when that evidence was unavailable, creating doubt toward witnesses or officers (Merola et al., 2016).

BWC Clearing Allegations

Results make all the difference when gauging changes in officer support of BWCs. Gaub et al. (2016) conducted a study comparing officer perceptions of BWCs in three police departments in the western United States from 2013 to 2015, before and after BWC implementation, demonstrating varying perceptions. Gaub et al. (2016) noted a change in officer skepticism after BWC footage immediately cleared complaint allegations. In another instance, Sandhu et al. (2015) conducted a qualitative case study following a non-scientific approach without randomized data with acknowledged subjective results reflective of officer opinions. The study found that officers benefit from BWCs by capturing favorable video evidence, protecting them from accusations, criticism, and complaints, reinforcing BWCs' value for disproving anti-

police narratives and countering complaints (Sandhu, 2017). Lum et al. (2019) concluded that officers consider BWCs as protection against accusations of wrongdoing. Following a 6-month cluster randomized trial in Miami, Florida, Peterson et al. (2021) determined BWC evidence led to a 93% increase in the conviction or adjudication of crimes against police officers based on the unique characteristics of the offense captured by BWC footage. Similar results for crimes committed against corrections officers could provide greater protection for corrections officers.

BWC Context and Training

Wallace et al. (2018) examined six months of BWC implementation data in Spokane, Washington following a staggered rollout using a randomized process for the two phases of the process with a treatment group and a control group. The study addressed concern over BWCs as surveillance, creating an internal and external form of scrutiny over officer behavior related to exposure risk leading to de-policing to minimize risk exposure (Wallace et al., 2018). Findings indicated no evidence of officer reluctance to conduct law enforcement duties, refuting the de-policing narrative (Wallace et al., 2018). A distinction of BWC video for officer protection comes with the ability to capture the event in its entirety, as opposed to the out-of-context and last-moment bystander videos, allowing visibility of an officer's humanity, bravery, and work ethic (Gaub et al., 2017; Peterson et al., 2021; Wallace et al., 2018).

The context captured by BWCs provides excellent training opportunities by recording the good and bad examples of working with youth. The first-person video captures psychological and behavioral events as they occur, allowing leaders and training personnel to enhance the professional development of YDCs. Worden and Mclean (2014) note three contributions BWC systematic observations provide an understanding of technique, decision-making, and environments. Reime et al. (2017) advocate that more significant learning through observation

enhances staff understanding, and hands-on participation with BWCs in training simulations creates confidence in professional roles. Reime et al. (2017) examined a comparative study using participants and observers in simulation training following a mixed-methods design of questionnaires, observations, and interviews. A study in a Norwegian police academy showed noticeable differences between groups using BWCs in training and a control group without them (Phelps et al., 2016). Phelps et al. (2016) identify how video footage results in better memory of mental processes at the time of action, improves understanding, and improves professional development. The advantage of BWCs is the realistic training followed by video review, allowing group collaboration to reinforce training objectives (Phelps et al., 2016).

BWC Impact on Allegations in Corrections

Sydes et al. (2020) focused on how correctional officers perceived their safety, finding the most significant impact on professional safety, meaning protecting corrections officers against false allegations. Corrections officers did not feel BWCs made them safer or changed inmates' behavior, but the video provided evidence for resolving allegations of wrongdoing (Sydes et al., 2020, 2022). Beales and Marsh (2016) noted how BWCs supported internal misconduct and external prosecutions, protecting corrections officers from false accusations. Dodd et al. (2020) recognized the benefits of holding inmates accountable and the protective value to corrections officers associated with professional protection. TJJD staff could see similar value from BWCs with evidence to support them against false allegations. BWCs provide video documentation of the context of events that includes sound, something lost from reviewing CCTV footage alone.

Additionally, BWCs could help protect youth from PREA violations by supporting their allegations against staff and removing potential predators who were otherwise unchecked in their actions. BWCs will not eliminate PREA violations but provide an additional tool for protecting

youth from predators and staff from unfounded accusations. Studies supporting BWCs' ability to provide staff with greater professional protection and youth with better protection from hidden predators could significantly contribute to decision-makers' approval for the BWC program and expenses. TJJD's implementation of the BWC program specified higher accountability and transparency levels, supporting facility staff falsely accused of misconduct, and a means for youth and staff accountability (*The Texas Model Plan for Reform*, 2019).

Theoretical Foundation

Procedural justice theory began from Thibaut and Walker's (1975) work and expanded as a critical theory in psychology, sociology, political science, organizational behavior, and other fields (Hagan & Hans, 2017). Tyler, Greenberg, and others defined procedural justice as normative compliance with authority established on the belief in the right and authority of those in power based on perceptions of fairness, trustworthiness, respect, and legitimacy (Campbell et al., 2020; Martin & Bradford, 2019). Nagin and Telep (2017) found that perception-based studies show that citizens' perceptions of procedurally-just treatment relate closely to perceptions of police legitimacy, leading to legal compliance. A person's attitude toward authority and the rule of law comes from their feeling of legitimacy toward the police and the criminal justice system, making legitimacy a critical variable in criminological research (Henderson et al., 2010; Martin & Bradford, 2019). Analysis of legitimacy requires empirical realities responsive to a social context available through analysis of BWC studies (Martin & Bradford, 2019).

BWCs and Procedural Justice Studies

Researchers studying the Los Angeles Police Department (LAPD) used BWC footage to observe officers performing their duties to determine if they were procedurally just (McCluskey et al., 2019). These observations help reveal if officers are using fair and legitimate strategies.

McCluskey et al. (2019) followed a systematic social observation (SSO) approach based on 725 hours of a ride-along in the same LAPD divisions. The study consisted of 124 rides and 555 observations of citizen BWC responses for procedural justice effects, resulting in significant increases in procedural justice attributable to BWCs (McCluskey et al., 2019). McCluskey et al. (2019) took a different approach from surveys by measuring procedural justice through SSOs of 555 encounters between citizens and police. Thompson et al. (2020) conducted a two-wave online self-reported survey in Milwaukee between 2017 and 2018, with 1,527 respondents revealing community support of BWCs. Findings from the surveys indicated the community perceived police behaviors as procedurally just when they knew departments used BWCs, increasing transparency in community encounters (Thompson et al., 2020). Using procedural justice techniques and supporting procedural justice principles within communities with historic racial tensions increased trust with continued face-to-face engagements (Thompson et al., 2020).

Owens and Finn (2018) examined BWC implementation in the United Kingdom, examining implementation in 10 or 32 districts following a randomized controlled trial with a process evaluation. Findings related to procedural justice examined the interaction outcome measures, complaints, and other measures exploring police and public interactions (Owens & Finn, 2018). Officers wearing BWCs were more careful to comply with procedures and processes, articulating reasons for decisions and improving public perceptions of fairness and procedural justice (Owens & Finn, 2018). Demir et al. (2018) reviewed BWC application in 860 traffic stops through the procedural justice lens using post-traffic survey results on a Likert scale from strongly disagree to strongly agree for stops with and without BWCs. Results indicated enhanced citizen perceptions of procedural justice and police legitimacy for police with BWCs (Demir et al.,

2018). Both studies show an ability to reach procedural justice outcomes using BWCs as a technological solution in police encounters measured by survey results and SSOs.

These studies demonstrate how BWC systematic observation allows an observer to determine if police follow fair and legitimate strategies in community encounters or how they implement departmental policy. McCluskey et al. (2019) and Huff et al. (2020) both consider perceptions of legitimacy through BWC application. Saulnier et al. (2019) shifted the focus of procedural justice research from an outcome-oriented emphasis to treatment-related relational concerns. Relational models explaining a process' value come from interpersonal aspects of neutrality, respect, voice, and trust (Lind & Tyler, 1988; Tyler & Blader, 2003). Saulnier et al. (2019) examined survey data of patrol officers and supervisors in the Chicago Police Department administered in person between March 30, 2017, to June 15, 2017. The research findings identified previously unidentified factors, including occupational burnout, autonomy or privacy concerns, and instrumental justice concerns that significantly affected officer support for BWCs (Saulnier et al., 2019). Instrumental factors refer to concerns related to authority-subordinate interactions, and the research highlights the relevance of a person's authority role and officer concern with BWCs being used as a procedural aspect of encounters instead of addressing relational concerns (Saulnier et al., 2019).

Procedural Justice in Corrections

Applying procedural justice in corrections consists of practicing principles of respect, fairness, trust, and voice within a corrections environment (Howard & Wakeling, 2020; Kinsella et al., 2021; Nagin & Telep, 2017). In corrections, procedural justice comes from inmates' perception of correctional staff's specific procedures and treatment, leading to perceived fairness outcomes (Campbell et al., 2020; Steiner & Wooldredge, 2015). Perceptions of fair procedures

and treatment lead to greater compliance with agency rules and guard commands, meaning fewer misconduct incidents in the prison environment (Campbell et al., 2020; Henderson et al., 2010; Howard & Wakeling, 2020). Campbell et al. (2020) conducted a stratified random sampling of 144 inmates from two prison facilities in Maine consisting of survey questions that inmates answered independently. Results indicated that perceptions of legitimacy provide the strongest predictor of inmate willingness to cooperate and empower correctional officers, depending on how inmates perceive the disciplinary process (Campbell et al., 2020).

Kinsella et al. (2021) interviewed 41 juvenile corrections staff from three juvenile facilities in urban and rural Indiana, finding a benefit from trauma-informed approaches in procedural justice training. Procedural justice applies a trauma-informed framework, shaping interactions between staff and inmates (Henderson et al., 2010; Howard & Wakeling, 2020; Kinsella et al., 2021; Steiner & Wooldredge, 2015). This study examines TJJD staff perceptions of BWC's procedural justice transparency and accountability standards improvements.

Procedural Justice and the Texas Model

Policies connected to procedural justice that TBRI engagement levels outlined guide interactions between the TJJD employees and youth. TBRI practices that the Texas Model adopted provide observable behaviors related to respect, fairness, trust, and voice, identified as procedural justice principles (Howard & Wakeling, 2020; Kinsella et al., 2021; Nagin & Telep, 2017). In implementing the Texas Model in a discussion of procedural justice theory, Sytsma (2021) provided a clear argument for using BWCs to monitor staff progress. Sytsma (2021) argued that:

> Scholars have emphasized a distinction between perceptions of fairness and actual officer actions—the latter of which is much more easily articulated in policing policies, more

> amenable to direct observation by a third party, and less influenced by the personal biases of the targets. (para. 4)

It is essential to know if TJJD employees are following policies related to procedural justice theory to understand if the agency is, in fact, working towards rebuilding community trust. This study helps hold the TJJD accountable for its commitment to improving legitimacy by implementing the Texas Model and seeks to verify if the Texas Model's adoption of TBRI practices follows procedural justice practices, supporting greater legitimacy.

Chapter Summary

Rebranding the TYC to TJJD does not erase the lack of legitimacy and community trust from the sexual assault and sexual abuse scandals (Cate, 2016; Donnelly, 2018). The desire for increased legitimacy and accountability led to an $18 million CCTV surveillance system installation capturing video evidence in secure facilities and halfway houses (Cate, 2016). Additionally, youth population reductions led to the Texas Model, a new strategy focused on trauma-informed care, requiring a change in the focus of direct care staff to intervention principles with supporting strategies (The Texas Model Plan for Reform, 2019). A part of the Texas Model strategy calls for BWC use to support monitoring TBRI principles following an SSO approach and examining staff procedural applications (Howard et al., 2015; Parris et al., 2015; Razuri et al., 2015; Reid et al., 2018; The Texas Model Plan for Reform, 2019). Application of SSO monitoring requires facility and direct care staff to wear BWCs and follow agency policy for activation procedures, making their perceptions of BWCs paramount for future monitoring success. In addition to supporting the Texas Model's application, BWCs fill CCTV gaps to support PREA, agency policy, and procedural justice, providing a technological tool for establishing community trust (Ahlin, 2019; Cate, 2016; Donnelly, 2018; Greenberg, 2019).

Police and corrections studies indicate that officer perceptions of BWCs influence their support, potentially impacting their adherence to policy and making it essential to consider factors influencing those perceptions (Guab et al., 2016). Saulnier et al. (2019) determined occupational burnout, autonomy or privacy concerns, and instrumental justice concerns significantly affected officer support for BWCs. Other influences on perception include organizational implementation approaches and perceived professional safety through protection from false allegations (Beales & Marsh, 2016; Dodd et al., 2020; Lum et al., 2019; Sandhu, 2017; Stoughton, 2018; Sydes et al., 2020, 2022; White et al., 2018). This study aims to examine correctional staffs' perceptions of BWCs using survey data collected over time in two repeated surveys, allowing for examination of perception changes over time. This study provides the first examination of these perceptions within juvenile corrections and the United States corrections system. This study also illustrates the relationships between staff members' age, gender, race, educational status, position, and facility location and their perceptions of BWCs' impact on procedural justice and other variables.

CHAPTER THREE: METHODS

Overview

Body-worn cameras provide a technological solution for improving the TJJD's legitimacy in the community. Research indicates that progress toward BWC implementation depends upon officer buy-in and staff support (Gaub et al., 2016; Stoughton, 2018). Positive officer support of BWCs could lead to enhanced value during implementation, while negative views might challenge implementation and hinder the multimillion-dollar investment (Fan, 2018; Jennings et al., 2014). Understanding staff attitudes toward BWCs and their perceived benefits and limitations before and after implementation assists in identifying required leader and policy engagement for a better transition (Gaub et al., 2016; Snyder et al., 2019).

BWCs' effects in U.S. correctional environments remain unknown due to the few agencies adopting them and the lack of published research findings. Unions and experts question BWCs' usefulness with the existing CCTV cameras installed (*Armstrong et al. v. Newsom et al.,* 2021; Welsh-Huggins, 2021). Current literature outside the U.S. primarily refers to officer surveys and incident data (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022). Chillar et al. (2021) discussed the increase in recording technology, allowing better human behavior observation in its natural setting and creating a methodological framework for future research studies. The key factor in transitioning to an observational approach in BWC corrections research requires staff to follow policy dictating the BWC use, often determined by officer perceptions of BWC systems.

This study aims to examine TJJD staff perceptions over time using secondary data from two identical TJJD staff surveys in 2020 and 2022. The staff surveyed included YDCs, dorm supervisors, managers, assistant superintendents, superintendents, mental health professionals,

caseworkers, educators, and training staff (Open Records Request #37675, Follow Up to ORR #37249, 2022). These staff are essential to the survey because they wear the BWCs and interact significantly with youth. The survey data provide an opportunity to account for population changes and potential perspective changes since its initial implementation (Bachman & Schutt, 2019).

Design

The author conducted this quantitative study following Liberty University's Institutional Review Board's approval (IRB-FY22-23-232). This study relies on secondary data provided by TJJD, allowing for quantitative data analysis of staff perceptions across Texas secure facilities, ranging from the northernmost border in Gainesville to the southernmost border in Edinburg. The study follows an exploratory quantitative approach by analyzing non-experimental survey data using a repeated cross-sectional research design (Bachman & Schutt, 2019). The dissertation examines these surveys over time, and Cummings (2017) identified repeated cross-sectional designs as a valuable technique in understanding perceptions of variables in time (see also Radey, 2019).

This study examines correctional staff's perceptions of BWCs using survey data collected approximately two years apart. All TJJD staff were invited to complete the Texas Model survey in January 2020 and again in April 2022. As an incentive, the facility entered staff who completed the survey were entered into a lottery and one respondent from each facility received a $50 Amazon gift card. Similar benefits were offered for each survey in 2020 and 2022. The advantage of examining the results of the same data repeated over time comes with the use of time-series data examining attitude changes over time (Radey, 2019). The data come from a subset of a more extensive survey examining the Texas Model. The current study examines a portion of the survey

data relevant to the research questions, including demographics, work variables, facility locations, and specific BWC-related questions.

Research Questions

This study expands upon Dodd and colleagues' (2020) research by exploring juvenile officer and staff views of BWCs in a state-level juvenile facility in the United States. BWC implementation and use in TJJD secure facilities started in 2018, and it is the only state-level juvenile corrections organization in full implementation in the U.S. (Linder, 2018). Like Dodd et al. (2020), this research provides other correctional agencies with data for consideration when implementing BWCs. The research questions guiding this study are:

RQ1: To what extent do Texas Juvenile Justice Department (TJJD) facility staff support the use of body-worn cameras (BWCs) within juvenile justice facilities, and how has that support changed since implementation?

RQ2: Will a person's employment facility, age group, gender, race, education, facility type, and position category influence facility staff perceptions of BWCs?

Hypotheses

The null hypothesis for this study is:

H0: There is no statistically significant influence on the Texas Juvenile Justice Department (TJJD) staff's perceptions of body-worn cameras (BWCs) related to facility, age, gender, race, education, facility type, or position.

Participants and Setting

The study participants were drawn from TJJD facility staff from the five secure facilities in Gainesville, Mart, Brownwood, Giddings, and Edinburg, Texas. These five facilities were chosen because they are TJJD's secure facilities and locations where BWCs were mandated

(*TJJD Institution Operations Manual*, 2018). Gainesville, Texas is 67 miles north of Dallas with a population of 17,735, average household income of $53,887, and median age of 33.4 years (Gainesville, Texas Population 2022, n.d). Mart, Texas is located 21.4 miles east of Waco, Texas with a population of 2038, average household income of $51,423, and median age of 34.3 years (Mart, Texas Population 2022, n.d.). Brownwood, Texas is 171 miles southwest of Dallas with a population of 18,056, average household income of $60,652, and median age of 34.8 years (Brownwood, Texas Population 2022, n.d.). Giddings, Texas is 56 miles east of Austin, with a population of 5207, average household income of $49,880, and median age of 32.2 years (Giddings, Texas Population 2022, n.d.). Edinburg, Texas is 230 miles south of San Antonio and 80 miles from the Mexico border with a population of 110,572, average household income of $65,081, and median age of 28.8 years (Edinburg, Texas Population 2022, n.d.).

Survey Population

TJJD survey participants included the YDCs from levels III through V, dorm supervisors, facility managers, facility assistant superintendents, facility superintendents, and other direct care staff. For this study, the respondents were separated into four groups by roles and years of service: junior YDCs, senior YDCs, facility management, and direct care staff, based on their years of experience and positional influence. YDCs begin at level III and remain in that position from zero to 18 months, after which they transition to a YDC IV, continuing through 78 months until they are eligible to become a YDC V (*Become a Youth Development Coach*, n.d.). YDCs require a high school diploma or the equivalent, must be at least 21 years old, undergo a background investigation, complete 80 hours of training, 20 hours of on-the-job training, and pass a certification exam (Employment, certification, and training, 2018). YDCs provide youth support and safety while developing youth problem-solving skills and intervening in negative youth

behavior (*Become a Youth Development Coach*, n.d.). Junior YDCs include YDCs I through IV junior YDCs have up to six and a half years of experience (*Become a Youth Development Coach*, n.d.). YDC Vs are senior YDCs with over six and a half years of experience (*Become a Youth Development Coach*, n.d.). Dorm supervisors oversee daily assigned dorm operations, lead, and manage YDCs, and supervise implementation of the Texas Model (*TJJD - Dorm Supervisor I - Team Leader-State Services (GNS) - 24258*, 2022). The senior YDC group includes dorm supervisors and YDC V who mentor junior YDCs.

Table 1

Youth Development Coach Levels

YDC Levels	Education Required	Required Years of Experience
YDC III	High school diploma	0–18 months
YDC IV	High school diploma	19–78 months
YDC V	High school diploma	79 months and above

Note. Equivalent education includes a GED. YDCs undergo a background investigation, complete 80 hours of training, 20 hours of on-the-job training, and pass a certification exam.

Survey respondents also included facility leaders, consisting of managers, assistant superintendents, and superintendents comprising facility management. The facility management determine the leadership decisions for each facility. Each facility has multiple dorms that house youth, and facility leadership decisions impact multiple dorms in the facility's administration. Other survey participants were mental health professionals, case workers, educators, or training staff labeled as Direct Care Staff. Everyone assigned to the facilities received the voluntary Qualtrics survey to their government-assigned email from the TJJD research department and the BWC questionnaire provided additional questions for those TJJD staff. Every participant was

asked, “Do you regularly utilize a body-worn camera while at work?” and was directed to answer with a yes or no response. Those in the BWC sample responded “Yes” and those who selected “No” were not shown the BWC questions and taken to the end of the survey. The January 2020 Texas Model Qualtrics online survey response rate resulted in a 32% response rate with a sample size of 466 and a population of 1478. The BWC-specific questionnaire participants consisted of 147 respondents, resulting in a 32% response rate (Open Records Request #37675, Follow Up to ORR #37249, 2022). The second Qualtrics survey administered in April 2022 contained the same BWC questions included in the 2020 survey. The 2022 survey response rate was 33%, with a sample size of 396 respondents from a population of 1208. The BWC-specific questionnaire participants comprised 147 respondents, resulting in a 37% rate (Open Records Request #37675, Follow Up to ORR #37249, 2022). The survey data contained staff member information for age group, gender, ethnic group, educational attainment, job title, and facility location.

Demographics

This section describes the respondents’ age group, gender, race, and education level. The data below represent the 2020 and 2022 respondents. Table 2 depicts age data in age groups under 24, 25–34, 35–44, 45–54, 55–64, and 65 or over. The table then shows the frequency of age groups within that year’s total number of respondents, followed by the percentage of respondents. The tables reflect the 2020 BWC-specific questionnaire shows a greater representation of the 25–34 and 35–44 age groups, increasing from 33–40 in the 25–34 age group and 30 to 41 in the 35–44 age group. Additionally, the 45–54 age group decreased from 46 to 32, and the 55–64 age group dropped from 30 to 23.

Table 3 shows gender by male or female, indicating that over 50% of respondents were female. The table then shows the gender frequency within that year’s total number and percentage

of respondents, increasing in females from 52.4% in 2020 to 57.2% in 2022. Though the total surveyed in 2022 was slightly down from 2020, the number of female staff completing the survey increased.

Table 2

TJJD Age Groups for the 2020 and 2022 BWC Questionnaire

Age Group	2020		2022	
	n	%	*n*	%
Under 24	3	2.0	4	2.8
25–34	33	22.4	40	27.6
35–44	30	20.4	41	28.3
45–54	46	31.3	32	22.1
55–64	30	20.4	23	15.9
65 or over	5	3.4	5	3.4

Table 3

TJJD Gender Selection for the 2020 and 2022 BWC Questionnaire

Gender	2020		2022	
	n	%	*n*	%
Male	70	47.6	62	42.8
Female	77	52.4	83	57.2
Total	147	100.0	145	100.0

Table 4 provides the respondent's race, identified as American Indian (AMIND), Asian (ASIAN), American Indian or Alaska Native (AIOAN), multi-racial (MULTI), Black or African American (BLACK), Hispanic (HISPA), or White (WHITE). The table shows the race selection frequency within that year's total number and percentage of respondents. Notable changes between 2020 and 2022 were an increase in those responding as White from 33.3 to 38.6 and a decrease in those responding as Black from 36.1% to 23.4%. The 2022 survey added those identifying as AIOAN and MULTI.

Table 4

TJJD Race Selection for the 2020 and 2022 BWC Questionnaire

Race	2020		2022	
	n	%	*n*	%
AMIND	2	1.4	1	.7
ASIAN	1	.7	1	.7
AIOAN	n/a	n/a	2	1.4
MULTI	n/a	n/a	8	5.5
BLACK	53	36.1	34	23.4
HISPA	42	28.6	43	29.7
WHITE	49	33.3	56	38.6
Total	147	100.0	145	100.0

Note. American Indian = AMIND, Asian = ASIAN, American Indian or Alaska Native = AIOAN, multi-racial = MULTI, Black and African American = BLACK, Hispanic = HISPA, white = WHITE.

Table 5 provides a summary of the respondents' selections for their education level within the categories of not indicated, less than high school graduation, high school graduation or equivalent, some college, technical school, two-year college degree, bachelor's degree, master's degree, doctorate (academic), doctorate (professional), or post-doctorate. The table then shows the education level selection frequencies within that year's total number of and percentage of respondents. Notably, the number of respondents who responded "Not Indicated" decreased their responses from 105 in 2020 to 45 in 2022. Another notable change was the number of respondents ranging from "Some College" to "Doctorate (Professional)," with an increase from 18 in 2020 to 63 in 2022. The large number of respondents who noted "Not Indicated," meaning the data were missing from the survey and created concerns about comparing the 2020 and 2022

data related to respondents' education levels. The missing data from 144 respondents required treating their responses as missing for statistical modeling.

Table 5

TJJD Education Level Selection for the 2020 and 2022 BWC Questionnaire

Education Level	2020		2022	
	n	%	*n*	%
Less than high school graduation	n/a	n/a	1	.7
High school graduation or equivalent	23	15.6	36	24.8
Some college	1	.7	3	2.1
2-year college degree	2	1.4	13	9.0
Bachelor's level degree	8	5.4	40	27.6
Master's level degree	7	4.8	7	4.8
Doctorate (professional)	1	.7	n/a	n/a
Not indicated	105	71.4	45	31
Total	147	100.0	145	100.0

Work Variables

This section contains respondents' work data, including categories of junior YDCs, senior YDCs, facility management, and other direct care staff. One distinction between the tables was the decrease of "Junior YDC" from 55 in 2020 to 50 in 2022 and the decrease of "Senior YDC" from 68 in 2020 to 52. The "Direct Care Staff" number also increased from 12.9% in 2020 to 26.2% in 2022.

Table 6

TJJD Position Category Selection for the 2020 and 2022 BWC Questionnaire

Position Category	2020		2022	
	n	%	*n*	%
Facility Management	5	3.4	5	3.4
Direct care staff	19	12.9	38	26.2
Junior YDC	55	37.4	50	34.5
Senior YDC	68	46.3	52	35.9
Total	147	100.0	145	100.0

Note. Respondents comprising facility management include managers, assistant superintendents, and superintendents. Senior Youth Development Coaches (YDCs) include Dorm Supervisors and YDC level V. Junior YDCs consist of YDC level III and Level IV. Direct care staff consist of all other assigned facility staff assigned a BWC who completed the survey.

Setting

Facility Location and Type

This section includes survey respondent data for the five secure facilities in table 7 for Gainesville, Mart, Brownwood, Giddings, and Edinburg. The table provides facility locations, frequency of respondents indicating employment at that facility, and overall percentage of facility's respondents who answered the BWC questionnaire. These locations are Gainesville, McLennan, Ron Jackson and Ron Jackson Operations and Administration (O&A), Giddings, and Evins. The facilities' youth population include 80% violent offenders, 44% with special needs, 5% with intense mental health needs, 70% with at least one parent in prison, and 70% with backgrounds of physical, emotional, and sexual abuse, neglect, or family violence (Texas Juvenile Justice Department, 2019). The Evins facility is in Edinburg, housing male youth with the highest staff ratio designated for housing the most violent youth through the Phoenix program with a 1:4

ratio of staff to youth and a population cap goal of 128 (*Texas Model Plan for Reform*, 2020). Table 6 shows respondents who indicated that "Evins" as their facility increased from 18.4% in 2020 to 26.9% in 2022. Gainesville's facility is in Gainesville, Texas, housing male youth designated as sex offenders with a 1:8 staff to youth ratio with a goal of 96 youth as the estimated maximum (*Texas Model Plan for Reform*, 2020). The number of respondents who indicated Gainesville decreased from 19.7% in 2020 to 15.2% in 2022.

Giddings' facility is in Giddings, Texas, housing male youth designated for determinately sentenced youth without high mental health needs with a 1:8 staff-to-youth ratio capped at the goal of 160 youth (*Texas Model Plan for Reform*, 2020). The respondents indicating "Giddings" decreased from 19.7% in 2020 to 13.8% in 2022. The McLennan County State Juvenile Correctional Facility (McLennan) in Mart, Texas is the primary location for male youth serving an indeterminate sentence (*Texas Model Plan for Reform*, 2020). The youth at McLennan exclude sex offenders, determinate youth, or violent youth without mental health needs and require a 1:8 staff-to-youth ratio with a goal of a total youth population of 160 (*Texas Model Plan for Reform*, 2020). The respondents indicating McLennan decreased slightly from 21.8% in 2020 to 19.3% in 2022. Ron Jackson and Ron Jackson O&A are in Brownwood, Texas, and are both female facilities and agency intake facilities, meaning that male and female juveniles arrive here for processing. Still, the permanent juvenile population consists of female youth with a goal of housing only 80 youth (*Texas Model Plan for Reform*, 2020). Respondents who indicated Ron Jackson increased from 18.4% in 2020 to 23.4% in 2022, and those who indicated Ron Jackson O&A decreased from 2% in 2020 to 1.4% in 2022.

Table 7

TJJD Facility Location Selection for the 2020 and 2022 BWC Questionnaire

Facility Locations	2020		2022	
	n	%	*n*	%
Evins	27	18.4	39	26.9
Gainesville	29	19.7	22	15.2
Giddings	29	19.7	20	13.8
McLennan	32	21.8	28	19.3
Ron Jackson	27	18.4	34	23.4
Ron Jackson O&A	3	2.0	2	1.4
Total	147	100.0	145	100.0

Note. Ron Jackson Operations and Administration (O&A) indicates that staff in-process youth, including males and females, as they arrive at TJJD before they are assigned a facility. Though Ron Jackson is a female facility, males remain for processing and reassignment for at least two weeks.

Table 8 describes facility type, indicating whether the employees worked in a male or female juvenile facility. The only campus consisting of female juveniles is in Brownwood, Texas, so those showing their campus location as Brownwood identified as working in a female facility. Brownwood is an intake facility, meaning that male and female juveniles arrive there for processing; however, the permanent juvenile population at Brownwood, Texas consists of female youth. The category Ron Jackson describes staff working with female youth, while Ron Jackson O&A identifies the staff who worked with males. The number of staff who indicated that they worked in a female facility increased from 18.4% in 2020 to 23.4% in 2022, providing a distinct view of staff working with female youth.

Table 8

TJJD Facility Type for the 2020 and 2022 BWC Questionnaire

Facility Type	2020		2022	
	n	%	*n*	%
Ron Jackson O&A	3	2.0	2	1.4
Female facility	27	18.4	34	23.4
Male facility	117	79.6	109	75.2
Total	147	100.0	145	100.0

Note. Ron Jackson Operations and Administration (O&A) indicates staff who in-process youth, including males and females, as they arrive at TJJD before assignment to a facility. Though it is a female facility, males remain for processing and reassignment for at least two weeks.

Instrumentation

The instrument used to measure each variable in this study is a subset of the Texas Model Survey. The survey asked respondents if they regularly use BWCs, allowing a yes or no answer. Those who answered yes were presented with a questionnaire asking how they believed BWCs could improve 1) transparency, 2) accountability, 3) staff behavior, 4) youth behavior, 5) youth complaint investigations, 6) criminal case prosecution, 7) civil case investigations, and 8) staff training (Open Records Request #37675, Follow Up to ORR #37249, 2022). The TJJD research section collected data using Qualtrics' online survey tools in January 2020 and repeated the survey in April 2022, allowing comparisons. The answer choices for each variable were collected using a 5-point Likert scale: 1 = *Strongly Disagree*; 2 = *Somewhat Disagree*; 3 = *Neither Agree nor Disagree*; 4 = *Somewhat Agree*; 5 = *Strongly Agree*. The survey questions followed the themes used in previous research by Dodd et al. (2020) examining correctional officer support for BWC use in correctional environments.

Validity

The TJJD research division uses peer-reviewed research from multiple studies for the Texas Model, including questions of role ambiguity, input into decision-making, organizational fairness, dangerousness, job satisfaction, organizational commitment, burnout, self-efficacy, collective self-efficacy, affect, and optional open-ended questions mirrored from previously validated studies (Kuppst et al., 2015; Maslach & Jackson, 1981; Maslach et al., 1996; Matz et al., 2012; Sampson et al., 1997; Watson et al., 1988; Wells et al. 2009). The TJJD research department conducts internal validity analysis for each iteration of the Texas Model survey before data collection (Open Records Request #37675, Follow Up to ORR #37249, 2022). Analysis for each survey was completed by the TJJD research division but was not provided with the current PIR requests (Open Records Request #37675, Follow Up to ORR #37249, 2022).

Beyond the greater Texas Model Survey, the validity relevance to this study comes from the additional section dedicated to BWC users. Validity refers to whether the BWC questionnaire measures the perceptions it intends to measure (Abu-Baber, 2011; Ruane, 2016). Since the source of BWC questions came from prior research that sought an understanding of police and corrections researchers' perceptions of BWCs, the BWC questionnaire appears to demonstrate face validity by using similar instruments to measure perceptions (Gaub et al., 2016; Ruane, 2016; Smykla et al., 2016; Tankebe & Ariel, 2016). The difference between this survey and others is the number of questions asked. The eight questions represent the categories of other research, but other research asked more detailed questions within these categories (Gaub et al., 2016; Ruane, 2016; Smykla et al., 2016; Tankebe & Ariel, 2016). Content validity ensures that the BWC questionnaire includes all possible variable dimensions; however, with only eight questions, the BWC questionnaire's content validity does not include as many questions as other research

examining the same topic (Dodd et al., 2020; Gaub et al., 2016; Ruane, 2016; Smykla et al., 2016; Tankebe & Ariel, 2016). Though the surveys do not have as many questions as other research studies, the data represent the only survey data available in U.S. correctional facilities. Additionally, the surveys were not explicitly designed for this research like the other surveys conducted. This two-group test design provided an initial and comparison group, reducing threats to validity (Lunenburg & Irby, 2008).

Reliability

Though content validity may be in question, the question of reliability comes from the questions' ability to measure what they are intended to measure; in this case, staff perceptions of BWCs (Ruane, 2016). The BWC questions used similar previous research questions from existing literature, but just mirroring prior research does not guarantee the questions' reliability (Gaub et al., 2016; Ruane, 2016; Smykla et al., 2016; Tankebe & Ariel, 2016). Split-half test reliability assesses the consistency in measuring the correlation of the BWC questions using Cronbach's alpha, where an alpha value of .70 or above provides a good reliability indicator (Ruane, 2016). The eight BWC-related questions in this study showed sufficient internal consistency, thereby indicating reliability (Cronbach's alpha = 9.39; M = 1.8; SD = 2.4) of the BWC questionnaire to measure TJJD staff perceptions of BWCs.

Dependent Variables

Research Question1 asked, "To what extent do Texas Juvenile Justice Department (TJJD) facility staff support the use of body-worn cameras (BWCs) within juvenile justice facilities, and how has that support changed since implementation?" Answers to RQ1 relied upon the dependent variables answered in the Qualtrics survey about how facility staff believed BWCs could improve: 1) transparency, 2) accountability, 3) staff behavior, 4) youth behavior, 5) youth

complaint investigations, 6) criminal case prosecution, 7) civil case investigations, and 8) staff training, providing TJJD facility staff perceptions for the dependent variables of procedural justice, youth behavior, staff behavior, investigations, and staff training in January 2020 and a comparison of those dependent variables in April 2022.

The dependent variables, transparency and accountability, measure procedural justice by demonstrating transparency and trust through accountability (Schulenbert et al., 2017), allowing an integrated construct to the one dependent variable, *procedural justice*. Respondents were asked, "Please read the following statements and decide how strongly you agree or disagree with them: 'I think body worn cameras can improve: - Transparency; accountability'" (Open Records Request #37675, Follow Up to ORR #37249, 2022). Price et al. (2015) advocated combining dependent variables using different measures of the same construct into one, creating one dependent variable with multiple response measures. Therefore, this study combines transparency and accountability measures into the construct of *procedural justice*. Likewise, youth complaint investigations and civil case investigations both focus on investigations, permitting one dependent variable to measure staff perceptions of BWCs' effect on investigations. This study's six dependent variables included procedural justice, youth behavior, staff behavior, investigations, prosecution, and staff training. Because each dependent variable consists of the frequencies of Strongly Disagree, Somewhat Disagree, Neither Agree nor Disagree, Somewhat Agree, or Strongly Agree, the data are ordinal for the 2020 and 2022 surveys.

Research question 2 relied on the descriptive data available from the dependent variables. Research Question 2 asked: Are facility staff perceptions of BWCs related to the facility of employment, age group, gender, race, education, facility type, and position category? Answers to RQ2 relied on use of the dependent variables to determine if there is a relationship between

facility staff perceptions using the dependent variables procedural justice, youth behavior, staff behavior, investigations, and staff training and the independent variables.

Independent Variables

The independent variables from the TJJD survey included age group, gender, race, education, job title, facility type, and facility location, gathered from the more extensive survey based on the Texas Model. Price et al. (2015) advocate combining independent variables using different measures of the same construct, allowing for a more significant data analysis. TJJD data identifying job titles allow additional variables to analyze junior YDCs levels I to IV, senior YDCs recognized as level V and dorm supervisors, and facility management identified as managers, assistant superintendents, and superintendents. This study uses independent variables depicting three sub-categories: demographics, work variables, and facility locations. Demographics include age group, gender, race, and education; work variables include position categories of junior YDCs, senior YDCs, facility management, and other direct care staff. Facility locations include the five secure facilities: Gainesville, McLennan LT (Mart), Ron Jackson and Ron Jackson O&A (Brownwood), Giddings, and Evins (Edinburg) and facility type indicated whether it is a male or female facility. The independent variables frequencies are shown in Tables 1 through 7.

Procedures

The researcher sought approval from the Liberty University Institutional Review Board (IRB) using the Cayuse online submission system before conducting the research (Appendix A). The IRB response, IRB-FY22-23-232 A, determined the study did not classify as human subjects research, allowing for the collection of secondary data not involved in collecting identifiable, private information from or about living individuals (Appendix B). The data for the research came

from secondary data previously collected by the TJJD research department's Texas Model survey, free of any personally identifiable information from those taking the survey.

Obtaining TJJD survey data required submitting a public information request (PIR) according to the Texas Government Code, Chapter 552, which allows access to government records presumed publicly available (Texas Government Code Chapter 552 Public Information, 2020). The request detailed the documents requested, including completed reports, working papers, research materials, information related to the pre-existing BWC agency survey, and data pertaining to BWC costs, implementation, and documentation by email (Appendix C) (Texas Government Code Chapter 552 Public Information, 2020). If the agency wished to withhold the requested information, feeling it might be protected data, the process requires the Texas Attorney General to provide an open records letter ruling citing specific exemption requests according to Texas Government Code § 552.301(b). Exemptions include information about juvenile records covered by section 58.008, requiring the redaction of any names listed in the data. Therefore, the information meets PIR guidelines with redaction. TJJD provided the Texas Model secondary BWC survey data and information about the survey by email (Appendix D) with a Microsoft Excel datasheet of questions summarized in Appendix E. The data received were examined using IBM SPSS Statistics 27.0, discussed further in the data analysis section.

Dependent Variables

The dependent variables—procedural justice, youth behavior, staff behavior, prosecution, investigations, and staff training—showed cumulative frequencies skewed toward the responses strongly or somewhat disagree for the 2020 and 2022 surveys. Procedural justice consists of a cumulative strongly or somewhat disagree 2020 value of 70 (47.6%) and 2022 value of 132 (91.0%). Youth behavior consists of a cumulative strongly or somewhat disagree 2020 value of

90 (61.2%) and 2022 value of 74 (51.7%). Staff behavior consists of a cumulative strongly or somewhat disagree 2020 value of 104 (78.1%) and 2022 value of 109 (75.7%). Investigations consist of a cumulative strongly or somewhat disagree 2020 value of 116 (78.9%) and 2022 value of 131 (90.3%). Prosecution consists of a cumulative strongly or somewhat disagree 2020 value of 127 (80.1%) and 2022 value of 115 (79.3%). Staff training consists of a cumulative strongly or somewhat disagree 2020 value of 110 (75.3%) and 2022 value of 107 (73.8%).

The implications from the descriptive data analysis of the dependent variables for the 2020 and 2022 survey data resulted in skewed responses towards the disagreement options, with the majority of responses selected as disagree or strongly disagree. The cumulative percentage of strongly or somewhat disagree values for the 2020 and 2022 surveys consists of over 50% of the values in every dependent value, while the 2020 procedural justice dependent variable consists of 47%. The skewed respondent data required an adjustment from analyzing the Likert scale data results in the surveys. Rather than examine the skewed data from the Likert scale results, the data were transformed into either disagree or not disagree. This changed the results to dichotomous data with two choices from the survey data. Using neither agree or disagree, somewhat agree, or strongly disagree were invalid options, requiring an analysis using binary logistical regression. The dichotomous data now shows disagree (a combination of strongly disagree and somewhat disagree) and not disagree (a combination of neither agree or disagree, somewhat agree, and strongly agree). The two choices are disagree or does not disagree; this second category does not mean agree; it means the group did not disagree. This allows all the data to be considered using binary logistic regression. The dependent value responses were transformed into a dichotomous value consisting of disagree or not disagree.

Independent Variables

Tables 2 through 7 provide the dependent variables' frequencies, including age group, gender, race, education, job title, facility type, and facility location. Some of the data with low numbers must be considered missing and not included in the model or combined into an existing data category to provide the best model for data analysis. The age groups shown in Table 2 depict only three people under 24 in 2020 and four people under 24 in 2022. The modified data account for the low numbers and merges the 24 and 25–34 categories into one category: 34 or below. Table 3 provides gender data with no modifications. Table 4, TJJD Race Selection for the 2020 and 2022 BWC Questionnaire, depicts low numbers in categories other than Black, Hispanic, or White. To account for the low numbers, the data for modeling will only include data for black, Hispanic, or white respondents. Table 5 for higher education shows several categories with low numbers, permitting modeling modifications to the high school or equivalent and some college categories. Because of the high number of respondents who did not answer the question, *not indicated* is the third category. Table 6 depicted position categories and was not modified. Table 7 identifies facility locations and is unchanged. Table 8 identifies facility types, where the category Ron Jackson O&A indicated low counts of three respondents in 2020 and two respondents in 2022. The Ron Jackson O&A category will be identified as missing to permit better modeling.

Data Analysis

The statistical analysis examines how staff perceived BWCs, allowing comparisons between dependent variables based on their perceptions and the independent variables based on demographics, work variables, and facility locations. The demographics include age group, gender, race, and education level. The work variables include TJJD position categories. The facility locations include facility locations and types of facilities. The data analysis sections

examine the analysis plan in sequence for each research question using IBM SPSS Statistics 27.0 to conduct the statistical analysis.

RQ1

To answer the first research question, To what extent do Texas Juvenile Justice Department (TJJD) staff support the use of body-worn cameras (BWCs) within juvenile justice facilities, the Texas Model Survey was used to provide a snapshot of respondents' perceptions of BWCs for the dependent variables: procedural justice, youth behavior, staff behavior, prosecution, investigations, and staff training following a repeated cross-sectional design using descriptive statistics. Answering RQ1 required a summary of respondent responses by measuring frequencies with frequency tables to understand staff support for each dependent variable.

Determining differences between the survey groups requires analysis of perception changes between the 2020 and 2022 surveys. Data are described using frequency tables, as required by ordinal or nominal data, in the form of categorical data, which are best described in a nonparametric test (Lunenburg & Irby, 2008). Nonparametric tests are best for ordinal survey data because the data are not assumed to come from prescribed models allowing flexible parameters not fixed in advance (Lunenburg & Irby, 2008). The best nonparametric test for comparing the 2020 and 2022 surveys is chi-square (Lunenburg & Irby, 2008). The chi-square test compares the observed frequencies for each dependent variable with the expected frequencies using a chi-square test of significance to determine whether the groups were significantly different using SPSS for the analysis (Lunenburg & Irby, 2008).

RQ2

RQ2 examines if a person's employment facility, age group, gender, race, education, facility type, and position category influence staff perceptions of BWCs. Answering RQ2 relies

on using the dependent variables of procedural justice, youth behavior, staff behavior, investigations, prosecution, and staff training to determine if there is a relationship between the independent variables: age group, gender, race, education, work variables, and facility location. Answering the second research question necessitates the description of individual variables, requiring a correlation measure to determine the relationships needed for hypothesis testing (Lunenburg & Irby, 2008). With dichotomous dependent variables and nominal independent variables, binary logistic regression provides a mathematical model for describing the relationship (Fitzgerald & Fitzgerald, 2014; Kleinbaum & Klein, 2010).

Lemeshow et al. (2013) explain binary logistic regression as the best choice with dichotomous dependent variables, and the logistic distribution assists in proving a meaningful interpretation of the outcomes. The independent variables' binary logistic regression analysis used with the 2020 and 2022 respondent secondary data permitted the prediction of officer characteristics and perceptions to measure support for BWC use using SPSS for the analysis. This study used the predictor variables of demographics, work variables, and facility locations, determined by TJJD secondary data. The binary logistic regression results were used to test the null hypothesis to determine if there is a relationship between the TJJD staff perceptions of BWCs based on facility, age group, gender, race, education, facility type, or position.

The first assumption for binary logistic modeling required independence of observations, with each observation mutually exclusive, meaning each respondent individually responded to the surveys (Wilson & Lorenz, 2015). The second assumption required that any effect of clustering in binary logistic modeling be ignored (Wilson & Lorenz, 2015). Additional requirements for binary logistic modeling required dependent variables to have dichotomous dependent variables with two possible SPSS analysis outcomes (disagree or not disagree). The binary logistic regression

determines if factors influence the presence of characteristics (age group, gender, race, education, work variables, and facility location) using generalized linear models (Wilson & Lorenz, 2015). The binary logistical regression used a predictive model with a binary response of negative or not negative to model the probability of the independent variables' influence on those responses using SPSS (Wilson & Lorenz, 2015). The generalized linear models began with a random component specifying the probability of distribution of the response variable, assuming independent observations (Wilson & Lorenz, 2015). The first step for binary logistic regression required a logistic regression model using a block 0 null model without independent or predictor variables. The block 0 null model equations for each dependent variable examined the Wald chi-square tests of the null hypothesis that the constant is not 0 (not disagree). The significance level was determined for each dependent variable determining if to accept the null hypothesis because the constant is not 0 and examined the odds ratio (Exp(B)) for the likelihood of staff members choosing 1 (disagree) or 0 (not disagree) for the dependent variables.

The next step for binary logistic regression required the creation of classification tables that provided output from the binary logistic regression depicting the number of 0 (not disagree) and 1 (disagree), shown in Step 0 and Step 1, representing the null model without variables and the model including all variables. Each dependent variable required a classification table to determine the overall accuracy of each model. Next, each model was examined using the omnibus tests of the model coefficients tables that provided the overall statistical significance for each model, determining the relationship’s statistical significance and whether the model is a good fit, meaning the model will predict the observed outcomes (Wilson & Lorenz, 2015). The Hosmer and Lemeshow test provided the excepted goodness-of-fit statistic for binary logistic regression models by ordering predicted probabilities into groups that are rank-ordered according to their

predicted probabilities (Canary et al., 2017). For the model to be a good fit, it must not be statistically significant, meaning there is not sufficient evidence to conclude the model is a lack of fit (Klienbaum & Klein, 2010). Each dependent variable was tested with the models determined sufficient, showing the B coefficient, Wald test statistic, significance level, and odds ratio Exp(B). The B coefficient identifies the change in the dependent variable (Y) when the independent variable (X) increases by a constant amount, where Y provides the probability of an event occurring (Wilson & Lorenz, 2015). The odds ratio for each independent variable based on the change in the constant was supplied in the Exp(B) column. The Wald test provided the statistical significance of the independent variables resulting in the significance value (Sig.), providing the results for RQ2.

Chapter Summary

The methods chapter tied the theoretical research highlighted in the literature review into the study exploring the perceptions of body-worn camera use in TJJD by outlining the design, defining the research questions, hypotheses, participants and setting, setting, instrumentation, procedures, and data analysis. The data come from a subset of the Texas Model examining a portion of the survey data relevant to TJJD staff's perceptions of BWCs, including data on demographics, work variables, facility locations, and specific BWC-related questions. The study examines the TJJD staff's perceptions of BWCs of the dependent variables procedural justice, youth behavior, staff behavior, investigations, prosecution, and staff training and the independent variables age group, gender, race, education, job title, facility type, and facility location. Examining RQ1 follows a repeated cross-sectional design using descriptive statistics by measuring frequencies with frequency tables to understand staff support for each dependent variable. Comparing those differences between the 2020 and 2022 surveys requires analysis of

perception changes using the chi-square test of significance. RQ2 examines if a person's employment facility, age group, gender, race, education, facility type, and position category influence the TJJD staff perceptions using binary logistic regression to develop a mathematical model to describe the relationships with each of the dependent variables.

CHAPTER FOUR: FINDINGS

Overview

Although U.S. corrections organizations continue to advance BWC adoption in corrections environments (Blau, 2018; Body-Worn Camera Training and Technical Assistance, 2021; Defour, 2015; Elwell, 2019; Nexstar Broadcasting, 2019; Welsh-Huggins, 2021), there are only three published research studies related to BWC application in a corrections environment (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022). Existing research shows officer support for BWC use primarily to protect against allegations increasing the professional safety of correction officers and inmates (Beales & Marsh, 2016; Dodd et al., 2020; Sydes et al., 2020, 2022). This lack of research for implementation and use within U.S. jails and corrections facilities creates potential problems with BWC implementation or unintended consequences for officers and inmates (Lum et al., 2015). It is crucial for agencies to regularly check with their officers about their perceptions of BWCs because perceptions and personnel can change over time. Changes in perceptions might indicate the need for policy changes or changes in communication strategies.

This study attempts to explore the views of TJJD staff and determine their perceptions of BWC use. This study used pre-existing surveys, which followed a non-experimental, repeated cross-sectional research design exploring coaches' perceptions of BWCs, to examine TJJD facility staff's perceptions of BWCs. Understanding TJJD staff's support of BWCs indicates how the support could impact BWC usage. Research shows that officers' perceptions of BWCs influence their compliance with BWC policy, and TJJD would benefit from understanding the factors related to officer compliance (Hedberg et al., 2017; Katz et al., 2015; Kyle and White, 2017; Wallace et al., 2018).

This chapter provides the data analysis results following the analytical methodologies described in the previous chapter. The analysis of the results for each research question is presented and explained. The chapter ends with a summary of the analysis explaining the results by research question.

Research Question(s)

RQ1: To what extent do Texas Juvenile Justice Department (TJJD) facility staff support the use of body-worn cameras (BWCs) within juvenile justice facilities, and how has that support changed since implementation?

RQ2: Will a person's employment facility, age group, gender, race, education, facility type, and position category influence facility staff perceptions of BWCs?

Descriptive Statistics

The survey results depicted skewed results for the 2020 and 2022 surveys toward disagree and strongly disagree, requiring an adjusted approach to data analysis. Rather than examine the skewed data from the Likert scale results, the data were transformed into either disagree or not disagree. This changed the results to dichotomous data with two choices from the survey data.

2020 Survey Results

The dependent variable, procedural justice, had the following responses: 71 (48.3%) Strongly Disagree, 30 (20.4%) Somewhat Disagree, 33 (22.4%) Neither Agree nor Disagree, 6 (4.1%) Somewhat Agree, and 7 (4.8%) Strongly Agree (N=147). The dependent variable, youth behavior, had the following responses: 56 (38.1%) Strongly Disagree, 34 (23.1%) Somewhat Disagree, 20 (13.6%) Neither Agree nor Disagree, 11 (7.5%) Somewhat Agree, and 26 (17.7%) Strongly Agree (N=147). The dependent variable, staff behavior, had the following responses 81 (55.1%) Strongly Disagree, 33 (22.4%) Somewhat Disagree, 20 (13.6%) Neither Agree nor

Disagree, 5 (3.4%) Somewhat Agree, and 7 (4.8%) Strongly Agree (N=147). The dependent variable, investigations, had the following responses: 96 (65.3%) Strongly Disagree, 20 (13.6%) Somewhat Disagree, 19 (12.9%) Neither Agree nor Disagree, 5 (3.4%) Somewhat Agree, and 7 (4.8%) Strongly Agree (N=147). The dependent variable, prosecution, had the following responses: 97 (66.0%) Strongly Disagree, 20 (13.6%) Somewhat Disagree, 17 (11.6%) Neither Agree nor Disagree, 1 (.7%) Somewhat Agree, and 11 (7.5%) Strongly Agree (N=147). The dependent variable, staff training, had the following responses: 83 (56.5%) Strongly Disagree, 27 (18.4%) Somewhat Disagree, 22 (15.0%) Neither Agree nor Disagree, 3 (2.0%) Somewhat Agree, and 11 (7.5%) Strongly Agree (N=147). The implications of these results were respondent selections skewed toward strongly disagree or somewhat disagree.

2022 Survey Results

The dependent variable, procedural justice, had the following responses: 80 (55.2%) Strongly Disagree, 52 (35.9%) Somewhat Disagree, 9 (6.2%) Neither Agree nor Disagree, and 4 (2.8%) Strongly Agree (N=145). The dependent variable, youth behavior, had the following responses: 56 (38.6%) Strongly Disagree, 18 (12.4%) Somewhat Disagree, 18 (12.4%) Neither Agree nor Disagree, 21 (14.5%) Somewhat Agree, and 30 (20.7%) Strongly Agree (N=143). The dependent variable, staff behavior, had the following responses: 80 (55.2%) Strongly Disagree, 29 (20.0%) Somewhat Disagree, 19 (13.1%) Neither Agree nor Disagree, 8 (5.5%) Somewhat Agree, and 8 (5.5%) Strongly Agree (N=144). The dependent variable, investigations, had the following responses: 83 (57.2%) Strongly Disagree, 48 (33.1%) Somewhat Disagree, and 14 (9.7%) Neither Agree nor Disagree (N=145). The dependent variable prosecution consisted of 89 (61.4%) Strongly Disagree, 26 (17.9%) Somewhat Disagree, 15 (10.3%) Neither Agree nor Disagree, 5 (3.4%) Somewhat Agree, and 10 (6.9%) Strongly Agree (N=145). The dependent variable, staff

training, had the following responses 82 (56.6%) Strongly Disagree, 25 (17.2%) Somewhat Disagree, 19 (13.1%) Neither Agree nor Disagree, 8 (5.5%) Somewhat Agree, and 11 (7.6%) Strongly Agree (N=145). The implications of these results were similar to 2020 data, with respondent selections skewed toward strongly disagree or somewhat disagree.

Dichotomous Data

Tables 9 through 14 answer the first research question, to what extent do Texas Juvenile Justice Department (TJJD) staff support the use of body-worn cameras (BWCs) within juvenile justice facilities by providing frequency tables depicting respondents' perceptions of BWCs for the dependent variables procedural justice, youth behavior, staff behavior, prosecution, investigations, and staff training. The descriptive statistics provide an overview of the findings for each dependent variable, separated into categories for the 2020 and 2022 surveys. TJJD staff responded to the survey question, "Decide how strongly you agree or disagree with 'I think BWCs can improve procedural justice.'" Table 9 describes the frequencies of respondents who disagree or do not disagree with BWCs' impact on procedural justice; notably, the disagreement percentage increased from 68.0 to 91.0 between 2020 and 2022, indicating that TJJD staff lack confidence in the ability of BWCs to impact procedural justice. The increase in TJJD staff disagreement indicated they do not perceive that BWCs improved procedural justice. The survey results depicted skewed results for the 2020 and 2022 surveys toward disagree and strongly disagree. Kriengtuntiwong et al. (2021) identify binary logistic regression as a solution for skewed data, requiring a modification of the results into a binary dichotomous category of yes or no or other related binary choices. Due to the skewness of the 2020 and 2022 BWC survey data toward disagree or strongly disagree, the data were transformed into either disagree or not disagree. This changed the results to dichotomous data with two choices from the survey data.

The dichotomous data allow for an analysis using binary logistical regression. The data examine *disagree* responses, which include a combination of strongly disagree and somewhat disagree responses, and *does not disagree* responses, which include a combination of neither agree or disagree, somewhat agree, and strongly agree responses.

Table 9

TJJD Procedural Justice for the 2020 and 2022 BWC Questionnaire

		2020		2022	
		n	%	*n*	%
Valid	0 Not disagree	47	32.4	13	9.0
	1 Disagree	100	68.0	132	91.0
	Total	147	100.0	145	100.0

Note. Respondents ranked the statement: "I think BWCs can improve procedural justice." The category "not disagree" includes neither agree or disagree, agree, and strongly agree, and the category "disagree" includes disagree and strongly disagree from the original Likert scale.

TJJD staff responded to the survey question, "Decide how strongly you agree or disagree with I think BWCs can improve youth behavior" (Open Records Request #37675, Follow Up to ORR #37249, 2022). Table 10 provides the frequencies of respondents who disagreed or did not disagree with the impact of BWCs on youth behavior, with fewer respondents disagreeing that BWCs impacted youth behavior from 2020 to 2022. However, the frequency remains more than half of those surveyed. The responses indicated that TJJD staff appear to have greater confidence in the impact BWCs have on youth behavior, increasing from 2020 to 2022.

Table 10

TJJD Youth Behavior for the 2020 and 2022 BWC Questionnaire

		2020		2022	
		n	%	*n*	%
Valid	0 Not disagree	57	38.8	71	49.0
	1 Disagree	90	61.2	74	51.0
	Total	147	100.0	145	100.0

Note. Respondents ranked the statement: "I think BWCs can improve staff behavior" The category "not disagree" includes neither agree or disagree, agree, and strongly agree, and the category "disagree" includes disagree and strongly disagree from the original Likert scale.

Table 11 depicts the frequencies of respondents who disagreed or did not disagree with BWCs' impact on staff behavior. Respondents overwhelmingly disagreed that BWCs impact staff behavior, with both surveys reflecting over 75% and a slight increase of respondents disagreeing in the 2022 survey. The responses indicated that TJJD staff do not believe BWCs impacted staff behavior.

Table 11

TJJD Staff Behavior for the 2020 and 2022 BWC Questionnaire

		2020		2022	
		n	%	*n*	%
Valid	0 Not disagree	33	22.4	36	24.8
	1 Disagree	114	77.6	109	75.2
	Total	147	100.0	145	100.0

Note. Respondents ranked the statement: "I think BWCs can improve staff behavior" The category "not disagree" includes neither agree or disagree, agree, and strongly agree, and the category "disagree" includes disagree and strongly disagree from the original Likert scale.

Table 12 describes the frequencies of respondents who disagreed or did not disagree with BWCs' impact on investigations. Respondents disagreed that BWCs impact investigations, increasing from 68% to 90.3% from 2020 to 2022. Responses indicated that TJJD staff do not believe BWC footage impacted investigations.

Table 12

TJJD Investigations for the 2020 and 2022 BWC Questionnaire

		2020		2022	
		n	%	*n*	%
Valid	0 Not disagree	31	32.0	14	9.7
	1 Disagree	116	68.0	131	90.3
	Total	147	100.0	145	100.0

Note. Respondents ranked the statement: "I think BWCs can improve investigations" The category "not disagree" includes neither agree or disagree, agree, and strongly agree, and the category "disagree" includes disagree and strongly disagree from the original Likert scale.

Table 13 depicts the frequencies of respondents who disagree or did not disagree with BWCs' impact on prosecution. Respondents steadily disagreed that BWCs impact prosecution, with both surveys reflecting that 79% of respondents disagreed, with a slight decrease in the 2022 survey from 79.6% in 2020 to 79.3% in 2022. Responses indicated that TJJD staff lack confidence in the impact of BWC video footage on the prosecution of youth incidents.

Table 13

TJJD Prosecution for the 2020 and 2022 BWC Questionnaire

		2020		2022	
		n	%	*n*	%
Valid	0 Not disagree	30	20.4	30	20.7
	1 Disagree	117	79.6	115	79.3
	Total	147	100.0	145	100.0

Note. Respondents ranked the statement: "I think BWCs can improve prosecution" The category "not disagree" includes neither agree or disagree, agree, and strongly agree, and the category "disagree" includes disagree and strongly disagree from the original Likert scale.

Table 14 depicts the frequencies of respondents who disagreed or did not disagree with BWCs' impact on staff training. Respondents overwhelmingly disagreed that BWCs impact staff training, with both surveys reflecting just below 75% of respondents disagree, with a slight decrease in the 2022 survey. The responses indicated that TJJD staff do not believe BWCs impacted staff training.

Table 14

TJJD Staff Training for the 2020 and 2022 BWC Questionnaire

		2020		2022	
		n	%	*n*	%
Valid	0 Not disagree	37	25.2	38	26.2
	1 Disagree	110	74.8	107	73.8
	Total	147	100.0	145	100.0

Note. Respondents ranked the statement: "I think BWCs can improve staff training" The category "not disagree" includes neither agree or disagree, agree, and strongly agree, and the category "disagree" includes disagree and strongly disagree from the original Likert scale.

Results

RQ1

The second part of RQ1 addresses how support has changed since BWCs' implementation. Determining this change involved using chi-square to compare the 2020 and 2022 surveys by analyzing the data in a crosstab by year, followed by the Pearson Chi-Square test to determine significance. None of the dependent variables showed significant differences between the 2020 and 2022 surveys, as explained in Tables 15–20, indicating the perceptions of TJJD staff about the impact of BWCs on procedural justice, youth behavior, staff behavior, prosecution, investigations, and staff training experienced no significant change. The chi-square compares the actual observations to compare frequencies and determine the statistical significance of change over time for each dependent variable: procedural justice, youth behavior, staff behavior, prosecution, investigations, and staff training (Lunenburg & Irby, 2008). Table 15 compares procedural justice perceptions by survey years 2020 and 2022. A chi-square of independence showed no significant association between the 2020 and 2022 survey for the variable procedural *justice,* X^2 (4, N=292) = 4.904, p = .297, indicating that TJJD staff's perception of BWC impacts did not change over time.

Table 15

Procedural Justice by Survey Year

Crosstab Count			
		Year	
		2020	2022
Procedural Justice	1 Strongly disagree	70	80
	2 Somewhat disagree	28	29
	3 Neither agree nor disagree	36	21
	4 Somewhat agree	7	7
	5 Strongly agree	6	8
Total		147	145

Chi-Square Tests			
	Value	*df*	Asymptotic Significance (2-sided)
Pearson chi-square	4.904a	4	.297
Likelihood ratio	4.952	4	.292
Linear-by-linear association	.945	1	.331
N of valid cases	292		

Note. 0 cells (.0%) have an expected count of less than 5. The minimum expected count is 6.95.

X^2 (4, N=292) = 4.904, p = .297

Table 16 compares youth behavior perceptions by survey years 2020 and 2022. A chi-square of independence showed no significant association between the 2020 and 2022 survey for the variable of youth behavior, X^2 (4, N=290) = 8.385, p = .078. The chi-square result indicates no change in the TJJD staff perceptions of BWC impacts on youth behavior over time.

Table 1

Youth Behavior by Survey Year

Crosstab Count			
		Year	
		2020	2022
Youth Behavior	1 Strongly disagree	56	56
	2 Somewhat disagree	34	18
	3 Neither agree nor disagree	20	18
	4 Somewhat agree	11	21
	5 Strongly agree	26	30
Total		147	143

Chi-Square Tests			
	Value	*df*	Asymptotic Significance (2-sided)
Pearson chi-square	8.385a	4	.078
Likelihood ratio	8.518	4	.074
Linear-by-linear association	1.483	1	.223
N of valid cases	290		

Note. 0 cells (.0%) have an expected count of less than 5. The minimum expected count is 15.78.

X^2 (4, N=290) = 8.385, p = .078.

Table 17 compares staff behavior perceptions by survey years 2020 and 2022. A chi-square of independence showed no significant association between the 2020 and 2022 survey for the variable of staff behavior, X^2 (4, N=290) = 1.035, p = .904. The chi-square result indicates no change in the TJJD staff perceptions of BWC impacts on staff behavior over time.

Table 17

Staff Behavior by Survey Year

Crosstab Count			
		Year	
		2020	2022
Staff Behavior	1 Strongly disagree	81	80
	2 Somewhat disagree	33	29
	3 Neither agree nor disagree	20	19
	4 Somewhat agree	5	8
	5 Strongly agree	7	8
Total		146	144

Chi-Square Tests			
	Value	*df*	Asymptotic Significance (2-sided)
Pearson chi-square	1.035[a]	4	.904
Likelihood ratio	1.042	4	.903
Linear-by-linear association	.197	1	.657
N of valid cases	290		

Note. 0 cells (.0%) have an expected count of less than 5. The minimum expected count is 6.46.

X^2 (4, N=290) = 1.035, p = .904.

Table 18 compares perceptions by survey years 2020 and 2022. A chi-square of independence showed no significant association between the 2020 and 2022 survey for the variable investigations, X^2 (4, N=292) = 2.638, p = .620. The chi-square result indicates no change in the TJJD staff perceptions of BWC impacts on investigations over time.

Table 18

Investigations Total by Survey Year

Crosstab Count			
		Year	
		2020	2022
Investigations total	1 Strongly disagree	95	82
	2 Somewhat disagree	22	24
	3 Neither agree nor disagree	18	22
	4 Somewhat agree	5	9
	5 Strongly agree	7	8
Total		147	145

Chi-Square Tests			
	Value	*df*	Asymptotic Significance (2-sided)
Pearson chi-square	2.638[a]	4	.620
Likelihood ratio	2.655	4	.617
Linear-by-linear association	1.922	1	.166
N of valid cases	292		

Note. 0 cells (.0%) have an expected count of less than 5. The minimum expected count is 6.95.

X2 (4, N=292) = 2.638, p = .620.

Table 19 compares prosecution perceptions by survey years 2020 and 2022. A chi-square of independence showed no significant association between the 2020 and 2022 survey for the variable prosecution, X^2 (4, N=291) = 3.963, p = .411. The chi-square result indicates no change in the TJJD staff perceptions of BWC impacts on prosecution over time.

Table 19

Prosecution by Survey Year

Crosstab Count			
		Year	
		2020	2022
Prosecution of criminal cases	1 Strongly Disagree	97	89
	2 Somewhat Disagree	20	26
	3 Neither Agree nor Disagree	17	15
	4 Somewhat Agree	1	5
	5 Strongly Agree	11	10
Total		146	145

Chi-Square Tests			
	Value	*df*	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.963[a]	4	.411
Likelihood Ratio	4.209	4	.378
Linear-by-Linear Association	.280	1	.597
N of Valid Cases	291		

Note. Two cells (20.0%) have an expected count of less than 5. The minimum expected count is 2.99. X^2 (4, N=291) = 3.963, p = .411.

Table 20 compares staff training perceptions by survey years 2020 and 2022. A chi-square of independence showed no significant association between the 2020 and 2022 survey for the variable of staff training, X^2 (4, N=291) = 2.572, p = .632. The chi-square result indicates no change in the TJJD staff perceptions of BWC impacts on staff training over time.

Table 20

Staff Training by Survey Year

Crosstab Count			
		Year	
		2020	2022
Staff Training	1 Strongly Disagree	83	82
	2 Somewhat Disagree	27	25
	3 Neither Agree nor Disagree	22	19
	4 Somewhat Agree	3	8
	5 Strongly Agree	11	11
Total		146	145

Chi-Square Test			
	Value	*df*	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.572a	4	.632
Likelihood Ratio	2.658	4	.617
Linear-by-Linear Association	.139	1	.709
N of Valid Cases	291		

Note. 0 cells (.0%) have an expected count of less than 5. The minimum expected count is 5.48.

X^2 (4, N=291) = 2.572, p = .632

RQ1 Results

After outlining the descriptive statistics for research question one, the final part of the question asks how that support has changed since implementation. Comparing the 2020 and 2022 survey results indicated none of the dependent variables showed significant differences in the 2020 and 2022 surveys. The lack of change over time indicates the policies and procedures implemented over this period did not impact the perceptions of TTJD staff over time.

RQ2 Hypothesis

The author conducted a binary logistical regression analysis using SPSS 27 to test the null hypothesis: there is no statistically significant influence on the Texas Juvenile Justice Department (TJJD) staff perceptions of body-worn cameras (BWCs) related to facilities, age group, gender,

race, education, facility type, or position category. The independent variables included staff perceptions of BWCs' impact on procedural justice, youth behavior, staff behavior, investigations, prosecution, and staff training. The dependent variables influencing staff perceptions included facilities, age groups, gender, race, education, facility type, or position category.

Data Assumptions

This study required independence of observations, with each observation mutually exclusive (Wilson & Lorenz, 2015). All dependent variables represent independent observations, and the dependent and independent variable categories are mutually exclusive. The second assumption that any effect of clustering in binary logistic modeling was ignored (Wilson & Lorenz, 2015). The dichotomous dependent variables represented two possible SPSS analysis outcomes of disagree or not disagree. The age groups represented continuous independent variables; facilities, gender, race, education, facility type, and position category represented nominal variables.

Test of the Research Hypothesis

The author independently conducted a binary logistic regression analysis for each dependent variable (procedural justice, youth behavior, staff behavior, investigations, prosecution, and staff training) using the independent variables (facilities, age group, gender, race, education, facility type, and position category). Table 21 depicts the classification tables for the number of cases analyzed, missing data, and total. Table 22 shows the categorical variable frequencies and coding for the independent variables depicted in the models.

Table 21

Case Processing Summary

Unweighted cases		*n*	%
Selected cases	Included in analysis	272	93.2
	Missing Cases	20	6.8
	Total	292	100.0
Unselected cases		0	.0
Total		292	100.0

Table 22

Categorical Variables Codings (Independent Variables)

		%	Parameter coding (1)
Age group	1 34 or below	6	1.000
	2 35–44	69	.000
	3 45–54	62	.000
	4 55–64	74	.000
	5 65 or over	51	.000
	6 Blank	10	.000
Facility name	1 Ron Jackson	58	1.000
	2 Gainesville	46	.000
	3 Evins	63	.000
	4 Mclennan LT	58	.000
	5 Giddings	47	.000
Position category determined from job title provided	1 Direct care staff	51	1.000
	2 Senior YDC	116	.000
	3 Junior YDC	95	.000
	4 Facility management	10	.000
Ethnic group	1 Hispa	84	1.000
	2 Black	87	.000
	3 White	101	.000
Higher education	0 Missing	144	1.000
	1 High school or equal	55	.000
	2 Some college or higher	73	.000
Facility type	1 Male facility	214	1.000
	2 Female facility	58	.000
Gender	1 Female	152	1.000
	2 Male	120	.000

Null Model Equation

The first component of binary logistic regression created a logistic regression model using a block 0 null model without any independent or predictor variables. The following tables provide each dependent variable's block 0 null model equations. In Table 23, the dependent variable procedural justice is coded as 0 for not disagree and 1 for disagree. The Wald chi-square tests the null hypothesis that the constant is not 0 (not disagree). The significance level is .000, meaning less than a p-value of .05, showing the statistical significance and rejecting the null hypothesis because the constant is not 0. The odds ratio (Exp(B)) tells us that the likelihood of staff members choosing 1 (disagree) for the dependent variable procedural justice is higher than 244.3% of them saying 0 (not disagree).

Table 23

Variables in the Equation (Procedural Justice)

		B	S.E.	Wald	*df*	Sig.	Exp(B)
Step 0	Constant	.893	.134	44.725	1	.000	2.443

In Table 24, the dependent variable, youth behavior, is coded as 0 for not disagree and 1 for disagree. The Wald chi-square tests the null hypothesis that the constant is not 0 (not disagree). The significance level is .040, meaning less than a p-value of .05, showing the statistical significance and rejecting the null hypothesis because the constant is not 0. The odds ratio (Exp(B)) tells us that the likelihood of staff members choosing 1 (disagree) for the dependent variable youth behavior is higher than 128.6% of them saying 0 (not disagree).

Table 24

Variables in the Equation (Youth Behavior)

		B	S.E.	Wald	*df*	Sig.	Exp(B)
Step 0	Constant	.251	.122	4.228	1	.040	1.286

In Table 25, the dependent variable, staff behavior, is coded as 0 for not disagree and 1 for disagree. The Wald chi-square tests the null hypothesis that the constant is not 0 (not disagree). The significance level is .000, meaning less than a p-value of .05, showing the statistical significance and rejecting the null hypothesis because the constant is not 0. The odds ratio (Exp(B)) tells us that the likelihood of staff members choosing 1 (disagree) for the dependent variable youth behavior is higher than 312.1% of them saying 0 (not disagree).

Table 25

Variables in the Equation (Staff Behavior)

		B	S.E.	Wald	*df*	Sig.	Exp(B)
Step 0	Constant	1.138	.141	64.758	1	.000	3.121

In Table 26, the dependent variable—investigations—is coded as 0 for not disagree and 1 for disagree. The Wald chi-square tests the null hypothesis that the constant is not 0 (not disagree). The significance level is .000, meaning less than a p-value of .05, showing the statistical significance and rejecting the null hypothesis because the constant is not 0. The odds ratio (Exp(B)) tells us that the likelihood of staff members choosing 1 (disagree) for the dependent variable youth behavior is higher than 331.7% of them saying 0 (not disagree).

Table 26

Variables in the Equation (Investigations)

		B	S.E.	Wald	*df*	Sig.	Exp(B)
Step 0	Constant	1.199	.144	69.615	1	.000	. 3.317

In Table 27, the dependent variable, prosecution, is coded as 0 for not disagree and 1 for disagree. The Wald chi-square tests the null hypothesis that the constant is not 0 (not disagree). The significance level is .000, meaning less than a p-value of .05, showing the statistical

significance and rejecting the null hypothesis because the constant is not 0. The odds ratio (Exp(B)) tells us that the likelihood of staff members choosing 1 (disagree) for the dependent variable youth behavior is higher than 394.5% of them saying 0 (not disagree).

Table 27

Variables in the Equation (Prosecution)

		B	S.E.	Wald	*df*	Sig.	Exp(B)
Step 0	Constant	1.373	.151	82.664	1	.000	3.945

In Table 28, the dependent variable, staff training, is coded as 0 for not disagree and 1 for disagree. The Wald chi-square tests the null hypothesis that the constant is not 0 (not disagree). The significance level is .000, meaning less than a p-value of .05, showing the statistical significance and rejecting the null hypothesis because the constant is not 0. The odds ratio (Exp(B)) tells us that the likelihood of staff members choosing 1 (disagree) for the dependent variable youth behavior is higher than 294.2% of them saying 0 (not disagree).

Table 28

Variables in the Equation (Staff Training)

		B	S.E.	Wald	*df*	Sig.	Exp(B)
Step 0	Constant	1.079	.139	59.965	1	.000	2.942

Classification Tables

The classification tables provide output from the binary logistic regression depicting the number of 0 (not disagree) and 1 (disagree), shown in Step 0 and Step 1, representing the null model without variables and the model including all variables. Table 29 shows the classification table for procedural justice, indicating that the model is accurate 69.9% of the time. The

classification table shows the cut value as .5, meaning if the probability of a case falling in the 1 (disagree) category is greater than or equal to .5, it is classified as 1 (disagree).

Table 29

Classification Table (Procedural Justice)

			Observed	Predicted	
			"I think BWCs can improve – Procedural justice."		
			0 not disagree	1 disagree	% correct
Step 1	"I think BWCs can improve – Procedural justice."	0 not disagree	1	78	1.3
		1 disagree	4	189	97.9
	Overall percentage				69.9

Note. The cut value is .500.

Table 30 shows the classification table for youth behavior, indicating that the model is accurate 65.4% of the time. The classification table shows the cut value as .5, indicating if the probability of a case falling in the 1 (disagree) category is greater than or equal to .5, it is classified as 1 (disagree). The accuracy rate of 65.4% indicates the lowest percentage of the dependent variables, showing TJJD staff perceptions of BWC impacts on youth behavior has the most substantial variability.

Table 30

Classification Table (Youth Behavior)

			Observed	Predicted	
			"I think body-worn cameras can improve – Youth behavior."		
			0 not disagree	1 disagree	% correct
Step 1	"I think body-worn cameras can improve – Youth behavior."	0 not disagree	67	52	52
		1 disagree	42	111	111
	Overall percentage				65.4

Note. The cut value is .500.

Table 31 shows the classification table for staff behavior, indicating that the model is accurate 75.7% of the time. The classification table shows the cut value as .5, indicating if the probability of a case falling in the 1 (disagree) category is greater than or equal to .5, it is classified as 1 (disagree). The 75.7% accuracy rate indicates TJJD staff do not show substantial variability in their support of the impact of BWCs on staff behavior.

Table 31

Classification Table (Staff Behavior)

			Observed	Predicted	
			"I think body-worn cameras can improve – Staff behavior."		
			0 not disagree	1 disagree	% correct
Step 1	"I think body-worn cameras can improve – Staff behavior."	0 not disagree	6	60	9.1
		1 disagree	6	200	97.1
	Overall percentage				75.7

Note. The cut value is .500.

Table 32 shows the investigation classification table, indicating that the model is accurate 76.9% of the time. The classification table shows the cut value as .5, indicating that if the probability of a case falling in the 1 (disagree) category is greater than or equal to .5, then it is classified as 1 (disagree). The 76.9% accuracy rate indicates TJJD staff do not exhibit substantial variability in supporting the BWC impact on investigations.

Table 32

Classification Table (Investigations)

			Observed	Predicted	
			"I think body-worn cameras can improve – Investigations."		
			0 not disagree	1 disagree	% correct
Step 1	"I think body-worn cameras can improve – Investigations."	0 not disagree	0	63	.0
		1 disagree	1	208	99.5
	Overall percentage				76.9

Note. The cut value is .500.

Table 33 shows the classification table for prosecution, indicating that the model is accurate 80.9% of the time. The classification table shows the cut value as .5, indicating that if the probability of a case falling into the 1 (disagree) category is greater than or equal to .5, then it is classified as 1 (disagree). The 80.9% accuracy rate indicates TJJD staff do not show substantial variability in their support of the impact of BWCs on prosecution.

Table 33

Classification Table (Prosecution)

			Observed	Predicted	
			"I think body-worn cameras can improve – Prosecution."		
			0 not disagree	1 disagree	% correct
Step 1	"I think body-worn cameras can improve – Prosecution."	0 not disagree	4	51	7.3
		1 disagree	1	216	99.5
	Overall percentage				80.9

Note. The cut value is .500

Table 34 shows the classification table for staff training, indicating that the model is accurate 77.9% of the time. The classification table shows the cut value as .5, indicating if the

probability of a case falling into the 1 (disagree) category is greater than or equal to .5, then it is classified as 1 (disagree). The 77.9% accuracy rate indicates TJJD staff do not exhibit substantial variability in their support of the impact of BWCs on staff training.

Table 34

Classification Table (Staff Training)

			Observed	Predicted	
			"I think body-worn cameras can improve – Staff training."		
			0 not disagree	1 disagree	% correct
Step 1	"I think body-worn cameras can improve – Staff training."	0 not disagree	11	58	15.9
		1 disagree	2	201	99.0
	Overall percentage				77.9

Note. [a.] The cut value is .500.

Omnibus Tests of Model Coefficients

The omnibus tests of the model coefficients tables provided the overall model statistical significance for each model, determining statistical significance and good fit (Wilson & Lorenz, 2015). The Omnibus tests for model coefficients of block two for procedural justice were insignificant, Model ($x^2(17) = 13.674$, $p < .690$. The Omnibus tests for model coefficients of block two for youth behavior were significant, Model ($x^2(17) = 35.145$, $p < .006$. The Omnibus tests for model coefficients of block two for staff behavior were insignificant, Model ($x^2(17) = 21.499$, $p < .205$. The Omnibus tests for model coefficients of block two for investigations were insignificant, Model ($x^2(17) = 22.109$, $p < .181$. The Omnibus tests for model coefficients of block two for prosecution were insignificant, Model ($x^2(17) = 20.446$, $p < .252$. The Omnibus tests for model coefficients of block two for staff training were insignificant, Model ($x^2(17) = 24.797$, $p < .099$.

Hosmer and Lemeshow Test

The Hosmer and Lemeshow test provided the excepted goodness-of-fit statistic by ordering predicted probabilities into rank-ordered groups according to their predicted probabilities (Canary et al., 2017). The Hosmer and Lemeshow test showed the predictors as insignificant: procedural justice was insignificant (Step 1 equaled chi-squared = 9.977(8), p =.267); youth behavior was insignificant (Step 1 equaled chi-squared = 3.456(8), p =.903); staff behavior was insignificant (Step 1 equaled chi-squared = 4.721(8), p =.787); investigations were insignificant, (Step 1 equaled chi-squared = 7.069(8), p =.529); prosecution was insignificant (Step 1 equaled chi-squared = 4.563(8), p =.803); and staff training was insignificant (Step 1 equaled chi-squared = 10.956(8), p =.204). The results of the Omnibus Tests of Model Coefficients and the Hosmer and Lemeshow test provided statistical significance for the model.

RQ2

With statistically significant models, the analysis shifts to research question two: "Will a person's employment facility, age group, gender, race, education, facility type, and position category influence staff perceptions of BWCs?" Tables 34 through 39 examine the independent variables for each dependent variable. Each table shows the B coefficient, Wald Test statistic, significance level, and odds ratio Exp(B). The B coefficient identifies the change in the dependent variables (Y) when the independent variable (X) increases by a constant amount, where Y provides the probability of an event occurring. The odds ratio for each independent variable based on the change in the constant was supplied in the Exp(B) column. The Wald test provided the statistical significance of the independent variables resulting in the significance value (Sig.). Table 35 indicates no statistical significance from the independent variables, influencing their perceptions of BWCs' impact on procedural justice. The dependent variable, procedural justice, is

not statistically significant with any levels less than ($p < .05$), supporting the null hypothesis. The results indicate that none of the independent variables of facility location, age group, gender, race, education, facility type, or position category influenced staff perceptions of BWC's impact on procedural justice.

Table 35

Variables in the Equation (Procedural Justice)

		B	S.E.	Wald	*df*	Sig.	Exp(B)
Step 1	Gender (1 Female)	-.116	.299	.151	1	.698	.890
	Race			2.555	2	.279	
	Race (1 Hispa)	.697	.494	1.989	1	.158	2.008
	Race (2 Black)	-.096	.359	.072	1	.789	.908
	Age group category			1.510	5	.912	
	Age group category (1 34 or below)	.362	1.408	.066	1	.797	1.437
	Age group category (2 35–44)	-.205	.882	.054	1	.816	.815
	Age group category (3 45–54)	-.451	.866	.272	1	.602	.637
	Age group category (4 55–64)	-.369	.858	.185	1	.667	.691
	Age group category (5 65 or over)	-.040	.885	.002	1	.964	.960
	Facility name			3.225	4	.521	
	Facility name (1 Ron Jackson)	.347	.463	.560	1	.454	1.414
	Facility name (2 Gainesville)	.493	.466	1.120	1	.290	1.638
	Facility name (3 Evins)	-.432	.617	.491	1	.484	.649
	Facility name (4 Mclennan LT)	.310	.435	.509	1	.476	1.364
	Position category determined from job title provided			4.470	3	.215	
	Position category determined from job title provided (1 Direct Care Staff)	-1.172	1.136	1.064	1	.302	.310
	Position category determined from job title provided (2 Senior YDC)	-1.779	1.099	2.620	1	.106	.169
	Position category determined from job title provided (3 Junior YDC)	-1.388	1.127	1.517	1	.218	.249
	Education			.912	2	.634	
	Education (1 High School or Equal)	-.227	.390	.337	1	.561	.797
	Education (2 Some College or Higher)	-.428	.451	.901	1	.342	.652
	Constant	2.634	1.383	3.626	1	.057	13.926

Note. Variable(s) entered on Step 1: gender, race, age group category, facility name, position category determined from job title provided, education.

Table 36 indicates statistical significance from the independent variable position category for senior YDCs influencing their perceptions of BWCs' impact on youth behavior. The dependent variable, youth behavior, is statistically significant at the .025 and .043 levels ($p < .05$), rejecting the null hypothesis. The results indicate that the independent variables of facility location, age group, race, education, and facility type did not influence staff perceptions of BWC's impact on procedural justice. However, TJJD staff perceptions were influenced by gender and position category. The results indicate that the independent variable of female gender positively influenced staff perceptions of BWC's impact on youth behavior indicated by the B of .645, representing the change in the dependent variable (Y) when the independent variable (X) increases by a unit of one reflecting a positive relationship. However, the results indicated that the independent variable of position category for Senior YDCs negatively influenced staff perceptions of BWC's impact on youth behavior indicated by the B of -1.759, representing the change in the dependent variable (Y) when the independent variable (X) increases by a unit of one reflecting a positive relationship.

Table 36

Variables in the Equation (Youth Behavior)

		B	S.E.	Wald	*df*	Sig.	Exp(B)
Step 1	Gender (1 Female)	.645	.287	5.057	1	.025	1.906
	Race			3.199	2	.202	
	Race (1 Hispa)	.783	.441	3.161	1	.075	2.189
	Race (2 Black)	.268	.345	.601	1	.438	1.307
	Age group category			9.770	5	.082	
	Age group category (1 34 or below)	.134	1.168	.013	1	.908	1.144
	Age group category (2 35–44)	-.540	.761	.504	1	.478	.583
	Age group category (3 45–54)	.378	.755	.250	1	.617	1.459
	Age group category (4 55–64)	-.750	.741	1.025	1	.311	.472
	Age group category (5 65 or over)	-.283	.760	.138	1	.710	.754
	Facility name			1.566	4	.815	
	Facility name (1 Ron Jackson)	.251	.445	.319	1	.572	1.286
	Facility name (2 Gainesville)	.408	.455	.803	1	.370	1.503
	Facility name (3 Evins)	.638	.578	1.216	1	.270	1.892
	Facility name (4 Mclennan LT)	.192	.425	.204	1	.651	1.212
	Position category determined from job title provided			9.347	3	.025	
	Position category determined from job title provided (1 Direct Care Staff)	-1.381	.899	2.363	1	.124	.251
	Position category determined from job title provided (2 Senior YDC)	-1.759	.868	4.102	1	.043	.172
	Position category determined from job title provided (3 Junior YDC)	-.851	.889	.917	1	.338	.427
	Education			2.532	2	.282	
	Education (1 High School or Equal)	.591	.372	2.523	1	.112	1.806
	Education (2 Some College or Higher)	.291	.425	.470	1	.493	1.338
	Constant	.532	1.130	.222	1	.638	1.702

Note. Variable(s) entered on Step 1: gender, race, age group category, facility name, position category determined from job title provided, education.

Table 37 indicates no statistical significance from the independent variables influencing their perceptions of BWCs' impact on staff behavior. The dependent variable, procedural justice, is not statistically significant with any levels less than ($p < .05$), supporting the null hypothesis. The results indicate that none of the independent variables of facility location, age group, gender, race, education, facility type, or position category influenced staff perceptions of BWC's impact on staff behavior.

Table 37

Variables in the Equation (Staff Behavior)

		B	S.E.	Wald	*df*	Sig.	Exp(B)
Step 1	Gender (1 Female)	-.061	.319	.036	1	.849	.941
	Race			2.724	2	.256	
	Race (1 Hispa)	.032	.515	.004	1	.950	1.033
	Race (2 Black)	-.601	.397	2.295	1	.130	.548
	Age group category			5.885	5	.318	
	Age group category (1 34 or below)	.850	1.374	.382	1	.536	2.339
	Age group category (2 35–44)	.952	.822	1.340	1	.247	2.590
	Age group category (3 45–54)	.674	.800	.710	1	.399	1.962
	Age group category (4 55–64)	-.075	.768	.010	1	.922	.927
	Age group category (5 65 or over)	.355	.803	.196	1	.658	1.427
	Facility name			4.083	4	.395	
	Facility name (1 Ron Jackson)	.084	.481	.031	1	.861	1.088
	Facility name (2 Gainesville)	.300	.480	.391	1	.532	1.350
	Facility name (3 Evins)	-.016	.646	.001	1	.980	.984
	Facility name (4 Mclennan Lt)	.889	.489	3.305	1	.069	2.432
	Position category determined from job title provided			3.131	3	.372	
	Position category determined from job title provided (1 Direct Care Staff)	-.901	1.143	.622	1	.430	.406
	Position category determined from job title provided (2 Senior YDC)	-1.250	1.110	1.268	1	.260	.287
	Position category determined from job title provided (3 Junior YDC)	-.676	1.151	.346	1	.557	.508
	Education			5.494	2	.064	
	Education (1 High School or Equal)	.124	.437	.080	1	.777	1.132
	Education (2 Some College or Higher)	-.906	.498	3.314	1	.069	.404
	Constant	1.814	1.327	1.869	1	.172	6.137

Note. Variable(s) entered on Step 1: gender, race, age group category, facility name, position category determined from job title provided, education.

Table 38

Variables in the Equation (Investigations)

		B	S.E.	Wald	*df*	Sig.	Exp(B)
Step 1	Gender (1 Female)	.261	.325	.646	1	.422	1.299
	Race			1.665	2	.435	
	Race (1 Hispa)	.525	.513	1.044	1	.307	1.690
	Race (2 Black)	.435	.402	1.167	1	.280	1.545
	Age group category			8.155	5	.148	
	Age group category (1 34 or below)	-.367	1.203	.093	1	.760	.693
	Age group category (2 35–44)	.498	.819	.370	1	.543	1.645
	Age group category (3 45–54)	1.148	.838	1.877	1	.171	3.152
	Age group category (4 55–64)	-.091	.785	.013	1	.908	.913
	Age group category (5 65 or over)	.478	.822	.339	1	.561	1.614
	Facility name			4.922	4	.295	
	Facility name (1 Ron Jackson)	.503	.509	.974	1	.324	1.653
	Facility name (2 Gainesville)	1.007	.578	3.040	1	.081	2.737
	Facility name (3 Evins)	.049	.644	.006	1	.940	1.050
	Facility name (4 Mclennan Lt)	-.067	.462	.021	1	.885	.936
	Position category determined from job title provided			4.733	3	.192	
	Position category determined from job title provided (1 Direct Care Staff)	-1.319	1.142	1.333	1	.248	.267
	Position category determined from job title provided (2 Senior YDC)	-1.586	1.114	2.029	1	.154	.205
	Position category determined from job title provided (3 Junior YDC)	-.842	1.152	.535	1	.464	.431
	Education			.950	2	.622	
	Education (1 High School or Equal)	.405	.416	.948	1	.330	1.499
	Education (2 Some College or Higher)	.200	.494	.164	1	.686	1.221
	Constant	1.145	1.360	.708	1	.400	3.141

Note. Variable(s) entered on Step 1: gender, race, age group category, facility name, position category determined from job title provided, education.

Table 39 indicates no statistical significance from the independent variables influencing their perceptions of BWCs' impact on prosecution. The dependent variable—prosecution—is not statistically significant with any levels less than ($p < .05$), supporting the null hypothesis. The results indicate that none of the independent variables of facility location, age group, gender, race, education, facility type, or position category influenced staff perceptions of BWC's impact on prosecution.

Table 39

Variables in the Equation (Prosecution)

		B	S.E.	Wald	*df*	Sig.	Exp(B)
Step 1	Gender (1 Female)	.448	.336	1.781	1	.182	1.565
	Race			1.513	2	.469	
	Race (1 Hispa)	.309	.562	.303	1	.582	1.363
	Race (2 Black)	-.345	.411	.704	1	.401	.708
	Age group category			9.116	5	.105	
	Age group category (1 34 or below)	.883	1.370	.416	1	.519	2.419
	Age group category (2 35–44)	.880	.822	1.146	1	.284	2.412
	Age group category (3 45–54)	1.048	.816	1.652	1	.199	2.852
	Age group category (4 55–64)	.044	.770	.003	1	.955	1.045
	Age group category (5 65 or over)	1.245	.855	2.121	1	.145	3.474
	Facility name			1.033	4	.905	
	Facility name (1 Ron Jackson)	.192	.531	.130	1	.718	1.211
	Facility name (2 Gainesville)	.453	.546	.687	1	.407	1.573
	Facility name (3 Evins)	.112	.704	.026	1	.873	1.119
	Facility name (4 Mclennan Lt)	-.037	.487	.006	1	.939	.964
	Position category determined from job title provided			2.634	3	.452	
	Position category determined from job title provided (1 Direct Care Staff)	-1.018	1.148	.785	1	.376	.361
	Position category determined from job title provided (2 Senior YDC)	-1.312	1.107	1.405	1	.236	.269
	Position category determined from job title provided (3 Junior YDC)	-.795	1.143	.484	1	.487	.451
	Education			.922	2	.631	
	Education (1 High School or Equal)	.307	.447	.472	1	.492	1.359
	Education (2 Some College or Higher)	-.127	.513	.061	1	.805	.881
	Constant	1.306	1.337	.954	1	.329	3.690

Note. Variable(s) entered on Step 1: gender, race, age group category, facility name, position category determined from job title provided, education.

Table 40 indicates statistical significance from the independent variable race for Hispanic staff influencing their perceptions of BWCs' impact on staff training. The dependent variable—staff training—is statistically significant at the .033 level ($p < .05$), rejecting the null hypothesis. The results indicate that the independent variable of race positively influenced staff perceptions of BWC's impact on staff training, indicated by the B of 1.255, representing the change in the dependent variable (Y) when the independent variable (X) increases by a unit of 1 reflecting a positive relationship.

Table 40

Variables in the Equation (Staff Training)

		B	S.E.	Wald	*df*	Sig.	Exp(B)
Step 1	Gender (1 Female)	.326	.315	1.072	1	.300	1.385
	Race			6.411	2	.041	
	Race (1 Hispa)	1.255	.587	4.569	1	.033	3.506
	Race (2 Black)	-.248	.364	.463	1	.496	.780
	Age group category			2.832	5	.726	
	Age group category (1 34 or below)	-.245	1.199	.042	1	.838	.783
	Age group category (2 35–44)	.444	.837	.281	1	.596	1.558
	Age group category (3 45–54)	.452	.817	.307	1	.580	1.572
	Age group category (4 55–64)	-.122	.793	.024	1	.878	.885
	Age group category (5 65 or over)	.235	.825	.081	1	.776	1.265
	Facility name			2.250	4	.690	
	Facility name (1 Ron Jackson)	.632	.502	1.587	1	.208	1.882
	Facility name (2 Gainesville)	.101	.468	.046	1	.830	1.106
	Facility name (3 Evins)	-.077	.694	.012	1	.912	.926
	Facility name (4 Mclennan Lt)	.318	.451	.496	1	.481	1.374
	Position category determined from job title provided			4.093	3	.252	
	Position category determined from job title provided (1 Direct Care Staff)	-1.503	1.136	1.748	1	.186	.223
	Position category determined from job title provided (2 Senior YDC)	-1.549	1.106	1.960	1	.161	.212
	Position category determined from job title provided (3 Junior YDC)	-.949	1.139	.694	1	.405	.387
	Education			.816	2	.665	
	Education (1 High School or Equal)	.312	.411	.576	1	.448	1.366
	Education (2 Some College or Higher)	-.032	.476	.005	1	.946	.968
	Constant	1.420	1.341	1.121	1	.290	4.137

Note. Variable(s) entered on Step 1: gender, race, age group category, facility name, position category determined from job title provided, education.

RQ2 Results

The binary logistic regression rejects the null hypothesis that no statistically significant influence exists on TJJD staff's perceptions of BWCs related to gender, race, or position. Female and senior YDC perceptions are influenced by the TJJD staff's perceptions of the impact of BWCs on youth behavior. Hispanic TJJD staff member perceptions are influenced by BWC use in staff training. The binary logistic regression results refute the null hypothesis that there is no statistically significant influence on TJJD staff's perceptions of BWCs related to facilities, age group, gender, education, or facility type.

Chapter Summary

The findings showed the extent to which TJJD staff supported BWC use within juvenile justice facilities from the results of the 2020 and 2022 surveys conducted by the TJJD research division. The 2020 survey showed that 68% of the facility staff did not support BWC use for impacting procedural justice, which increased to 91% in 2022. The 2020 survey also showed that 61.2% of facility staff did not support BWC use for influencing youth behavior in 2020, but the 2022 survey revealed a decrease to 51%. The 2020 survey indicated that 77.6% did not support BWC use for influencing staff behavior, which decreased to 75.2% in 2022. The 2020 survey revealed that 68% of facility staff did not support BWC use for impacting investigations, which increased to 90.3% in 2022. The 2020 survey indicated that 74.8% of facility staff disagreed with BWCs' influence on staff training, with a slight change to 73.8% in 2022. The statistical analysis revealed that TJJD staff lacked confidence in the ability of BWCs to impact procedural justice, youth behavior, staff behavior, prosecution, investigations, and staff training.

Since the 2020 and 2022 surveys, by analyzing the data in a crosstab by year, followed by the Pearson Chi-Square test to determine significance, the dependent variables showed no

significant differences based upon a chi-square comparison of the surveys. None of the dependent variables showed significant differences for the dependent variables: procedural justice X^2 (4, N=292) = 4.904, p = .297; youth behavior X^2 (4, N=290) = 8.385, p = .078; staff behavior X^2 (4, N=290) = 1.035, investigation p = .904. X^2 (4, N=292) = 2.638, prosecution p = .620; X^2 (4, N=291) = 3.963, and staff training p = .411; X^2 (4, N=291) = 2.572, p = .632. The lack of change over time indicates the policies and procedures implemented over this period did not impact the BWC perceptions of TTJD staff over time.

Examination of research question two using binary logistic aggression determined that a person's race and position influenced facility staff's BWC perceptions. The binary logistic regression rejects the null hypothesis that there is no statistically significant influence on the Texas Juvenile Justice Department (TJJD) staff perceptions of body-worn cameras (BWCs) related to race or position category. Hispanic facility staff member (n = 84) survey results indicated that their BWC perceptions were positively impacted by the BWCs use in staff training, resulting from significant model findings, p < .033, B = 1.255. Additionally, female staff (n = 152) indicated a positive perception of the impact of BWCs on youth behavior, resulting from significant model findings, p < .025, B = .645. Alternatively, senior YDCs (n = 116), defined as YDC V staff and dorm supervisors, indicated their BWC use perceptions were negatively affected by the impact of BWCs on youth behavior, resulting from significant model findings, p < .043, B = -1.759. The next chapter will discuss the findings compared with the existing literature, explore the implications, discuss limitations, and make recommendations for future research.

CHAPTER FIVE: CONCLUSIONS

Overview

The previous chapter presented and analyzed the data. Chapter Five discusses the study and results, implications, limitations of the research, and recommendations for further research. This quantitative study of the perceptions of body-worn camera use in the Texas Juvenile Justice Department provides a glimpse into staff members' views on the impact of BWC use within a juvenile corrections environment.

Discussion

This study used pre-existing surveys to examine TJJD facility staff's BWC perceptions. TJJD's use of BWCs provides an opportunity to assist in restoring TJJD's relationship with the community based on prior physical and sexual abuse instances and allegations. Other research on perceptions of BWCs exists primarily in its law enforcement applications, with few published works focused on BWC use in a corrections environment. TJJD should be commended for implementing BWCs before any other state-level corrections facility in the nation, but the study results indicate future facilities should consider a more deliberate approach. This study relied on secondary survey data examining TJJD staff perceptions of BWCs in 2020 and 2022, providing an opportunity to explore the perceived impacts of BWCs on procedural justice, youth behavior, staff behavior, investigations, prosecution, and staff training. This study was conducted to answer two research questions:

RQ1

RQ1 examined to what extent TJJD facility staff supported BWC use within juvenile justice facilities and how that support changed since implementation. An analysis of the results of the 2020 and 2022 TJJD survey secondary data indicated that most facility staff do not support

BWC use to improve procedural justice, youth behavior, staff behavior, investigations, prosecution, or staff training. Most facility staff disagreed or strongly disagreed that using BWCs could make improvements. So many staff disagreed or strongly disagreed in the 2020 and 2022 surveys that the analysis required converting the response data to dichotomous data focused on disagree or not disagree. When comparing the 2020 and 2022 surveys, there were no statistically significant differences in staff views of BWCs' ability to improve procedural justice, youth behavior, staff behavior, investigations, prosecution, or staff training. This means most facility staff disagreed that BWCs could consistently improve procedural justice, youth behavior, staff behavior, investigations, prosecution, or staff training over two years.

This study's findings conflicted with Sydes and colleagues' (2020, 2022) and Dodd and colleagues' (2020) findings, which showed corrections officers' support of BWCs using similar survey results. When compared to police officers' perceptions of BWC improvements, This study's results conflict with police officer feelings ranked as positive or neutral or became positive in post-surveys after using them (Ellis et al., 2015; Gaub et al., 2018; Grossmith et al., 2015; Jennings et al., 2015; Koen, 2016; Smykla et al., 2015; White et al., 2018). White et al. (2018) found that adherence to the Bureau of Justice Assistance (BJA) Law Enforcement Implementation checklist, a best-practices guide geared toward practical BWC implementation, made a difference in officer perceptions in Temple, Arizona. TJJD established a BWC program in advance of any other state-level corrections agency, but they did not implement the program following the approaches of police agencies focused on measuring BWC effectiveness. TJJD implemented its BWC program without a plan for measuring staff perceptions through surveys dedicated to implementation support (Linder, 2018). The first surveys were completed as a subcomponent of the Texas Model survey in 2020 and 2022. Other organizations considering

BWC implementation should consider the results of organizations that followed a deliberate implementation model. Implementation of a BWC program with clear communications with stakeholders, executives, and staff, allowing offices a voice in organizational concerns, has shown support for the program and greater adherence to agency policy (Hedberg et al., 2017; Katz et al., 2015; Kyle & White, 2017; Lum et al., 2019; Malm, 2019; Wallace et al., 2018).

BWCs Clearing Allegations and Prosecution

TJJD staff's perceptions of BWC's inability to improve staff behavior were 77.6% in 2020 and 75.2% in 2022, while there was an increase in negative perceptions of investigation impacts from 68% in 2020 to 90.3% in 2022, which indicated that staff lacked confidence in how BWCs could influence investigations. TJJD staff indicated consistent negative perceptions toward prosecution, maintaining a 79% rate from 2020 to 2022. These findings clashed with those of Sydes et al. (2020, 2022) and Dodd et al. (2020), who both emphasized BWCs' importance for protecting corrections officers against false allegations and accurately capturing incident happenings. In police BWC use for investigations, BWC footage resulted in higher conviction rates with better outcomes for investigations, partly due to prosecutors' ability to visualize evidence and encounters (Ellis et al., 2015; Lum et al., 2019; Malm, 2019; Morrow et al., 2016; Pickering, 2020). Wallace et al. (2018) and Gaub et al. (2017) provided the best description of the protections that BWC use provided to officers, noting how the camera captures events as they occur, permitting the full visibility of humanity, bravery, and work ethic in context, highlighting how BWCs have cleared staff of false allegations or reduced the number of incidents resulting in prosecution.

Theoretical Foundation

This study's theoretical foundation rests on BWCs' influence on procedural justice, as procedural justice in corrections equates to perceived fairness outcomes and leads to greater compliance (Campbell et al., 2020; Henderson et al., 2010; Howard & Wakeling, 2020; Steiner & Wooldredge, 2015). This study measured procedural justice in the integrated construct responses to questions about transparency and accountability, resulting in a 68% disagreement rate in 2020 that increased to 91% in 2022. These results conflicted with research findings showing police officers wearing BWCs significantly increased citizens' feelings of procedural justice (McCluskey et al., 2019). Owens and Finn (2018) found that BWCs increased perceptions of fairness and procedural justice because police officers were more careful in compliance with policy and procedures. Though these studies consider citizens' views, TJJD staff's views of BWC's impact on procedural justice reflected a lack of confidence over time.

Procedural justice provides a feeling of perceived fairness influenced by the ability of BWCs to provide the consistent and fair implementation of policy (Campbell et al., 2020; Henderson et al., 2010; Howard & Wakeling, 2020; Steiner & Wooldredge, 2015). Fair implementation could come with the influence of staff behavior, but TJJD staff did not perceive BWC's impact on staff behavior. Organizations considering implementing BWCs should consider their policies and procedures for supervisor review of incidents and random footage, as discussed by Stoughton (2018). If the supervisory review of the BWC video could consistently impact negative staff behavior, it could provide a better perception of perceived fairness. Results of the survey analysis indicated senior YDCs did not believe that BWC could improve youth behavior. Without the positive perceptions of the facility senior YDCs within the organization, it is difficult to conclude a continued program without their buy-in will achieve compliance changes. The ideal

impact of BWCs on procedural justice comes from greater perceived fairness through the consistent implementation of policy aided by consistent video reviews influencing staff and youth behavior.

RQ2

Research question 2 examined if a person's facility of employment, age group, gender, race, education, facility type, and position category influence facility staff perceptions of BWCs. RQ2 was used to examine if the independent variables—facility of employment, age group, gender, race, education, facility type, and position category—would influence staff perceptions of BWCs' ability to improve procedural justice, youth behavior, staff behavior, investigations, prosecution, or staff training. After examining each independent variable through binary logistic regression, the independent variables indicating influence over facility staff included race, sex, and position category. Analysis indicated Hispanic facility staff members believed BWCs could improve staff training. The Hispanic staff supporting staff training consisted of 28.6 % in 2020 and 29.7% in 2022, providing an opportunity for TJJD to highlight this in their training program. The analysis also indicated that female staff believed BWCs could improve youth behavior, while senior YDCs, meaning dorm supervisors and YDC Vs, believed BWCs negatively impacted youth behaviors. TJJD could capitalize on the perceptions of Hispanic staff, consisting of approximately 30%, and female staff, consisting of over 50% of those surveyed, by highlighting those perceptions across the facilities. However, before substantial improvements might move forward, the perceptions of senior facility YDCs need to improve to influence the staff as facility senior leaders.

Implications

Though Hispanic staff indicated the positive impact of BWCs on training and female staff indicated the positive impact of BWCs on youth behavior, these positive impacts come with the adverse indication from senior YDCs that BWCs negatively impact youth. The existing TJJD program will continue to struggle without greater support from the senior YDCs within the organization. With a continued lack of support, the more impactful result comes from non-compliance with agency policy, jeopardizing the ability to measure improvements in Texas Model Trust-Based Relational Intervention (TRBI) principles. Gaub et al. (2016) determined that officer attitudes toward BWCs impacted their compliance with agency policy. Understanding staff support of BWCs provides an indicator of how the support could affect BWC use. The implication of a lack of support could mean TJJD staff not complying with BWC policy, jeopardizing the technological solution to implementing the Texas Model. The trauma-informed framework outlined in the Texas Model intends to shape the staff and youth interactions directly aligned with procedural justice (Henderson et al., 2010; Howard & Wakeling, 2020; Kinsella et al., 2021; Steiner & Wooldredge, 2015). BWCs provide a technical solution for the Texas Model's implementation, providing a method for gauging officer and youth compliance leading to greater procedural justice. To achieve these goals, the staff must comply with BWC policies. The TJJD staff's lack of support for the system could result in a lack of compliance, impacting the implementation of the Texas Model and negating the positive effects that BWCs could provide to protect staff from wrongful accusations.

BWC Implementation

Organizations seeking to implement BWCs should consider White and colleagues' findings (2018), which emphasized the importance of following the Bureau of Justice Assistance

(BJA) Law Enforcement Implementation checklist, a best-practices guide geared toward practical BWC implementation. White et al. (2018) recommended a clear policy for the supervisory review of BWC footage, creating clear communication about the supervisory review process to satisfy fears of better open monitoring. Agency communication of staff being held accountable for negative behavior and rewarded for positive behavior might improve perceptions toward the impact on staff and youth behaviors. The support for findings in police studies came from surveys meant to inform the organization about BWC implementation (Gaub et al., 2017; Wallace et al., 2018). These intentional processes should be incorporated into any organization's BWC implementation plan. The Department of Justice (DOJ) and BJA have detailed guidelines established for implementing BWCs for police with relevant factors related to corrections (Miller et al., 2014; White et al., 2018). The staff's overwhelming negative BWC perceptions indicate signs of potential occupational burnout, autonomy concerns, or authority-subordinate interaction concerns impacting support for BWCs (Saulnier et al., 2019). The DOJ guidelines would recommend a campaign focused on BWC benefits and limitations and the use of implementation guides and checklists to assist in detailed planning and implementation (Miller et al., 2014; White et al., 2018).

Greater Legitimacy

In policing, BWC implementation seeks greater legitimacy through increased accountability, reduced use of force, reduced inequality, and improved community relations (Graham et al., 2019; Jennings et al., 2015; Lum et al., 2019, p. 95; Nix et al., 2020; Wallace et al., 2018; Wooditch et al., 2020). Similarly, BWCs provide TJJD with an opportunity to assist in restoring its relationship with the community based on documented physical and sexual abuse instances and allegations. Seizing the opportunity requires greater transparency into BWC results

toward procedural justice, staff behavior, youth behavior, investigations, prosecution, and improvements in staff training. The first step toward greater legitimacy came with being the first state-level juvenile correctional organization in the nation to implement BWCs (Cate, 2016). BWCs provide better tools for supporting Prison Rape Elimination Act (PREA) compliance and highlighting the implementation results could support greater staff and community legitimacy.

Limitations

Lunenberg and Irby (2007) explain limitations as those factors not under the researcher's control which may affect the interpretation of the results or the ability to generalize the findings. Unlike other studies, the secondary surveys used were not dedicated to determining information related to BWC use. The study was a sub-component of the greater Texas Model study, limited to eight questions. Other research studies on BWC perceptions resulted from studies dedicated to determining those results with additional questions supporting these eight categories of questions (Gaub et al., 2016; Ruane, 2016; Smykla et al., 2016; Tankebe & Ariel, 2016). Other studies dedicated to understanding the efficacy of BWC implementation followed the same eight categories, but each category was expanded with other questions related to each category (Gaub et al., 2016; Ruane, 2016; Smykla et al., 2016; Tankebe & Ariel, 2016). The TJJD 2020 and 2022 studies' design was part of the Texas Model survey and was not established to assess implementation planning. The questions asked about BWCs in the Texas Model survey were not intended to be analyzed to understand the efficacy of BWC implementation. The only data available from TJJD to measure perceptions over time comes from the existing survey data. Though the survey contains only eight questions, the categories mirror similar studies dedicated to examining BWC perceptions, and Cronbach's alpha scores indicated internal consistency of the

questions to measure what they were intended (Gaub et al., 2016; Ruane, 2016; Smykla et al., 2016; Tankebe & Ariel, 2016).

Recommendations for Future Research

The findings of this study are limited to the eight questions asked as part of the Texas Model survey. They are not equivalent to similar studies using the eight categories with additional clarifying questions. Similar studies were designed to examine the implementation of BWCs before and after implementation (Gaub et al., 2016; Ruane, 2016; Smykla et al., 2016; Tankebe & Ariel, 2016). A more thorough study could focus exclusively on BWC implementation and expand on the questions asked to mirror similar research in the field. Additionally, this study demonstrates senior YDCs do not believe BWCs could improve youth behavior, but it does not provide insight into the factors weighing into those findings. Future research based on qualitative or mixed methods approaches that build from these results could offer richer information on why senior YDCs reached this belief.

Examining facility staff perceptions of BWC use in this study provided an understanding of staff perceptions. However, it did not examine technical difficulties, workload impacts, hesitation to conduct duties, and staff's cynical attitudes toward BWCs (Graham et al., 2019; Jennings et al., 2015; Lum et al., 2019, p. 95; Nix et al., 2020; Wallace et al., 2018; Wooditch et al., 2020). Identifying and addressing these issues could improve perceptions in later studies. Additionally, perceptions are linked to noncompliance (Gaub et al., 2016). Still, a study measuring noncompliance could provide TJJD and other organizations seeking to implement BWCs with a better understanding of the agency's ability to measure compliance and the extent of the issue. Since BWC use in corrections is just beginning, a study reviewing the implementation of footage supporting investigations and prosecution could better inform the field.

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Appendix A IRB Request

Project Information

*required

What type of project are you seeking approval for?

Please make the appropriate selection below.

Research

- Research is any undertaking in which a faculty member, staff member, or student collects information on living humans as part of a planned, designed activity with the intent of contributing relevant information to a body of knowledge within a discipline.

✓ **Archival or Secondary Data Use Research ONLY**

- Archival data is information previously collected for a purpose other than the proposed research. Examples include student grades and patient medical records.
- Secondary data is data that was previously collected for the purpose of research. For example, a researcher may choose to utilize survey data that was collected as part of an earlier study.

Doctor of Nursing Practice (DNP) Scholarly Project

- This option is specific to doctor of nursing practice (DNP) students' evidence-based practice scholarly projects.

Doctor of Ministry (DMin) Project

- This option is specific to Doctor of Ministry (DMin) student projects.

---

*required

Please indicate the primary purpose of this project:

Why is this project being proposed?

✓ Doctoral Research

***Note: Students must enter themselves as PI and their faculty sponsor under Faculty Sponsor.**

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*required

Have you passed your dissertation proposal defense?

Doctoral candidates may not submit their project for IRB review until they have successfully passed their proposal defense.

✓ Yes

No

N/A

Masters Research

Undergraduate Research

Faculty or Staff Research

Class Project

Other

Study Personnel

Please fill in all associated personnel below.

Please note: All study personnel must complete CITI training prior to receiving IRB approval. *The IRB will accept either of the following CITI courses: "Social & Behavioral Researchers" or "Biomedical & Health Science Researchers."*

- *IRB Training Information*
- CITI Training Website

---

*required

Primary Contact

The individual who will receive and respond to communication from the IRB should be listed as the primary contact. For student projects, the primary contact will be the student researcher(s). For faculty projects, the primary contact may be the researcher or a student(s), administrative assistant, etc. assisting the faculty member. The same individual may be listed as the primary contact and the principal investigator.

Name: David Stender
Organization: Government
Address: 1971 University Blvd , Lynchburg, VA 24515-0000
Phone:
Email: dstender@liberty.edu

*required

Principal Investigator (PI)

The principal investigator (PI) is the individual who will conduct the research or serve as the lead researcher on a project involving more than one investigator. For theses or dissertations, the student should be listed as PI.

Co-Investigator(s)

Co-investigators are researchers who serve alongside the principal investigator and share in the data collection and analysis tasks.

*required

Faculty Sponsor

Projects with students serving as the PI must list a faculty sponsor, typically a dissertation or thesis chairperson/mentor.

*required

Will the research team include any non-affiliated, non-LU co-investigators?

For example, faculty from other institutions without Liberty University login credentials. Note: These individuals will not be able to access the IRB application in Cayuse; however, the information provided below allows the LU IRB to verify the training and credentials of all associated study personnel.

Yes

✓ No

Conflicts of Interest

This section will obtain information about potential conflicts of interest.

*required

Do you or any study personnel hold a position of influence or academic/professional authority over the participants?

For example, are you the participants' supervisor, pastor, therapist, teacher, principal, or district/school administrator?

Yes

✓ No

*required

Do you or any study personnel have a financial conflict of interest?

For example, do you or an immediate family member receive income or other payments, own investments in, or have a relationship with a non-profit organization that could benefit from this research?

Yes

✓ No

Funding Information

This section will request additional information about any funding sources.

*required

Is your project funded?

Yes

✓ No

*required

Use of Liberty University Participants

Please make the appropriate selection(s) below:

✓ I do not plan to use LU students, staff, and/or faculty as participants.

- *Note: Use of LU students, faculty, or staff also includes the use of any existing data.*

I plan to recruit LU students from a limited number of specific, identified departments, student organizations, clubs, or teams (e.g., students taking a residential psychology course, members of the women's hockey team, etc.).

I plan to recruit students because they meet a specific set of demographic criteria (e.g., male, freshmen, Hispanic, etc.), and I will advertise my study through word of mouth, social media, or flyers hung on campus.

I plan to recruit students because they meet a specific set of demographic criteria (e.g., male, freshmen, Hispanic, etc.), and I will require university assistance to identify and recruit my participants (i.e., LU personnel will need to run a database query to identify eligible individuals and send your recruitment email on your behalf.)

I plan to recruit faculty and/or staff.

*required

Purpose

Please provide additional details about the purpose of this project. This section should be easy to read for someone not familiar with your academic discipline.

Write an original, brief, non-technical description of the purpose of your project.

Please DO:

- *Include a **BRIEF** description of your research hypothesis/question*
- *Provide a narrative that explains the major constructs of your study*
- *Explain how the data will advance your research hypothesis or question*

Please DO NOT:

- *Exceed 500 words*
- *Copy and paste your abstract or proposal into the text box*

The research questions guiding this study are:
RQ1: To what extent do Texas Juvenile Justice Department (TJJD) staff support the use of body-worn cameras (BWCs) within juvenile justice facilities, and how does that support change over time?
RQ2: Is officer support related to officer characteristics and perceptions of how BWCs impact factors related to procedural justice?

The purpose of this study is to examine the Texas Juvenile Justice Department (TJJD) staff's perceptions of BWCs using pre-existing surveys. The pre-existing surveys follow a non-experimental, repeated cross-sectional research design exploring coaches' perceptions of BWCs. Lum and colleagues (2019) indicated that officers wearing BWCs do not always favor the new technology, indicating technical difficulties, workload impacts, hesitation to conduct duties, cynical attitudes toward BWC use, and poor perceptions toward organizational justice. Gaub and colleagues (2016) determined that officer attitudes toward BWCs impacted their compliance with agency policy. Understanding TJJD staff support of BWCs indicates how the support could impact BWC usage.
The use of BWCs by TJJD provides an opportunity to assist in restoring its relationship with the community. BWCs provide a view of Staff compliance and youth behaviors to determine if the staff are, in fact, exhibiting behaviors consistent with TJJD's Texas Model and procedural justice practices. Research shows perceptions of fair procedures and fair treatment lead to fewer misconduct incidents and greater compliance (Cambell et al., 2020; Henderson et al., 2010; Howard & Wakeling, 2020). BWCs provide the technological solution for monitoring the implementation of

the Texas Model, but officers must comply with BWC policies. Research shows that officers' perceptions of BWCs influence their compliance with BWC policy, and TJJD would benefit from understanding what factors relate to officer compliance.

Although U.S. corrections organizations continue moving forward with BWC adoption in corrections environments (Blau, 2018; Defour, 2015; Body-Worn Camera Training and Technical Assistance, 2021; Elwell, 2019; Nexstar Broadcasting, 2019; Welsh-Huggins, 2021), only three published research studies exist related to the application of BWCs in a corrections environment. The lack of research creates potential problems with BWC implementation or unintended consequences for officers and inmates (Lum et al., 2015). When executives decide to implement technological solutions like BWCs, progress from implementation depends upon officer buy-in and staff support (Guab et al., 2016; Stoughton, 2018). Positive officer support of BWCs could lead to enhanced value during implementation, while negative views might make implementation challenging and hinder the multimillion-dollar cost investment (Fan, 2018; Jennings et al., 2014). Understanding staff attitudes toward BWCs and their perceived benefits and limitations before and after implementation assists in identifying required leader and policy engagement for a better transition (Gaub et al., 2016; Snyder et al., 2019). This research will provide the first documented use of BWCs in a corrections environment within the U.S. and provide data to support or refute findings in police research related to officer support.

Investigational Methods

Please indicate whether your project involves any of the following:

*required

Does this project involve the use of an investigational new drug (IND) or an approved drug for an unapproved Use?

Yes

✓ No

*required

Does this project involve the use of an investigational medical device (IDE) or an approved medical device for an unapproved Use?

Yes

✓ No

Archival Data

Use of Archival Data

This section will collect additional information about your proposed use of archival data.

*required

Please provide a description of the archival data and/or documents you plan to use/collect.

For example, what data fields are included in the dataset? What original instruments were used to obtain the archival data? What documents will you be requesting?

The instrument used to measure each variable in this study comes from a subset of the Texas Model Survey. The survey asked respondents if they regularly utilize BWCs, allowing for a yes or no answer. Those who answered yes to this question were presented with a questionnaire asking how they believed BWCs could improve 1) transparency, 2) accountability, 3) staff behavior, 4) youth behavior, 5) youth complaint investigations, 6) criminal case prosecution, 7) civil case investigations, and 8) staff training. The TJJD research section collected the data using Qualtrics' online survey tools in January 2020 and repeated the survey in April 2022, allowing comparisons. The answer choices for each variable were collected using a 5-point Likert scale: 1=Strongly Disagree; 2= Somewhat Disagree; 3= Neither Agree nor Disagree; 4= Somewhat Agree; 5= Strongly Agree. The survey questions followed the themes used in previous research by Dodd and colleagues (2020) examining correctional officer support for BWC use in correctional environments.

*required

Please describe your intended use of the archival data.

For example, how does use of the data relate to your study purpose? What are you hoping to discover by using and interpreting this data?

Answering RQ1 relies upon the dependent variables answered in the Qualtrics survey from how facility staff believed BWCs could improve 1) transparency, 2) accountability, 3) staff behavior, 4) youth behavior, 5) youth complaint investigations, 6) criminal case prosecution, 7) civil case investigations, and 8) staff training, providing perceptions of TJJD facility staff for the dependent variables procedural justice, youth behavior, staff behavior, investigations, and staff training in January 2020 and a comparison of those dependent variables of TJJD facility staff in April 2022.

The null hypotheses for this study is:

$H_0$1: There is no relationship between the Texas Juvenile Justice Department (TJJD) staff perceptions of body-worn cameras (BWCs) and facilities, age, gender, race, education, facility type, or position category.

Answering RQ2 and the null hypotheses relies on the use of the dependent variables to determine if there is a relationship between facility staff perceptions using the dependent variables procedural justice, youth behavior, staff behavior, investigations, and staff training and the independent variables.

*required

Please name the organization(s) from which you are seeking archival data.

Texas Juvenile Justice Department

*required

Please describe the steps you will take to secure the archival data.

For example, where will the data be stored and who will have access to it?
The secondary data from the TJJD survey require a public information request (PIR) according to the Texas government code, chapter 552, allowing access to government records.

*required

Where is the archival data located/housed?

For example, is the data publicly available (e.g., government website) or privately held (e.g., a private corporation or firm)?

✓ The data is publicly available *(i.e., anyone can obtain access).*

*required

How will you access the data?

For example, a website. If so, please provide the link to the website.
Obtaining the TJJD survey data required submitting a public information request (PIR) according to the Texas Government Code, Chapter 55, allowing access to government records presumed available to the public (Texas Government Code Chapter 552 Public Information, 2020). The request details the documents requested, including completed reports, working papers, research materials, information related to the pre-existing BWC agency survey, and data pertaining to costs, implementation, and documentation of BWCs (Texas Government Code Chapter 552 Public Information, 2020).

The data is privately held *(i.e., permission/special access is required to obtain the data).*

*required

Will you receive the raw data stripped of identifying information?

For example, will the data be free of any names, addresses, phone numbers, email addresses, student IDs, medical record numbers, social security numbers, birth dates, etc.?

✓ Yes

*required

State who will strip/redact the data.

This person should have regular access to the data and should be a neutral party not involved in the study.

The survey is conducted anonymously so it contains no PII data.

No

*required

Can the names or identities of the participants be deduced from the raw data?

Yes

✓ No

*required

Please place your initials in the box.

I will not attempt to deduce the identity of the participants in this project.

DDS

Appendix B IRB Approval

From: do-not-reply@cayuse.com <do-not-reply@cayuse.com>
Sent: Monday, August 29, 2022 8:50:37 AM
To: Stender, David
Subject: [External] IRB-FY22-23-232 - Initial: Non-Human Subjects Research

---

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

August 29, 2022

David Stender
Nicole Stottlemyre

Re: IRB Application - IRB-FY22-23-232 A QUANTITATIVE STUDY OF THE PERCEPTIONS OF BODY-WORN CAMERA USE IN THE TEXAS DEPARTMENT OF JUVENILE JUSTICE

Dear David Stender and Nicole Stottlemyre,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study does not classify as human subjects research. This means you may begin your project with the data safeguarding methods mentioned in your IRB application.

Decision: No Human Subjects Research

Explanation: Your study is not considered human subjects research for the following reason: It will not involve the collection of identifiable, private information from or about living individuals (45 CFR 46.102).

Please note that this decision only applies to your current application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued non-human subjects research status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this determination or need assistance in determining whether possible modifications to your protocol would change your application's status, please email us at irb@liberty.edu

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

Appendix C TJJD PIR

Public Records Request: Texas Model Survey -- BWCs

Stender, David <
Sun 5/15/2022 15:25
To: Open.Records@tjjd.texas.gov <Open.Records@tjjd.texas.gov>
Cc:

Bcc: Stottlemyre, Nicole (Helms School of Government)

To Whom it May Concern:

I would like to make the following updated PIR for the purpose of academic research to support dissertation research for criminal justice research for Liberty University.

From the Research Team:

Please provide an Excel spreadsheet export of the Texas model survey results conducted in January 2020. Provide the demographics of those participating in the survey and the results of the questions related specifically to BWCs. This survey is scheduled to be repeated in January 2021, and those results are also requested once completed.

Fields:

Please provide the Texas Model Survey with details on data on age, sex, race, educational attainment, and time with TJJD for both the 2019/2020 survey and the current survey with BWC questions.

I have the details listed below for the 2019/2020 survey but need them for the newest survey in 2022:

Job title, Facility, Do you regularly utilize a body-worn camera while at work?
Please read the following statements and decide how strongly you agree or disagree with them.
I think body-worn cameras can improve: - Transparency
Accountability Staff behavior Youth behavior Investigations of youth complaints Prosecution of criminal cases Investigation of civil cases Staff training "OPTIONAL:
Is there anything else you would like TJJD leadership to know about the use of body-worn cameras?"

The details from the demographics and the survey data will be used for determining relationships through multivariate regression analysis.

Thank you for the opportunity to complete my research on the use of BWCs in a juvenile corrections environment. There are no published studies on the use of BWCs in corrections in the US, and this research will contribute to a large gap in research.

All the best,

Dave Stender

David Stender

From: David Stende
Sent: Friday, November 19, 2021 10:40 PM
To: Open Records <Open.Records@tjjd.texas.gov>
Cc: Jim Elliott < ; Christian von Wupperfeld <

texas.gov>; Emily Knox >; Terri Dollar < >; Karol Davidson <
Subject: Body-Worn Camera PIR

To whom it may concern,
I would like to make the following PIR for the purpose of academic research to support dissertation research for criminal justice research for Liberty University.

From **M&I and Facility Safety**:
An Excel download of the SharePoint list at the following URL: https://tjjd.sharepoint.com/sites/MITeam/Lists/BodyWornCameraReview/AllItems.aspx
Please make the following Modifications:
-Replace the Assigned Staff Names With a Randomized replacement
-Scan for Coach or Youth Names and replace with Coach Randomized replacement and Youth Randomized Replacement (this can be done with find and replace and the Facility Safety Team has a template)
-Though actual names of staff or youth are not wanted in the reply, the random replacement should be the same for a repeated name to show the youth or coach appears multiple times without revealing their actual identity

From **the Research Team**:
Please provide an Excel spreadsheet export of the Texas model survey results conducted in January 2020. Provide the demographics of those participating in the survey and the results of the questions related specifically to BWCs. This survey is scheduled to be repeated in January 2021 and those results are also requested once completed.
Fields:
Job title, Facility, Do you regularly utilize a body-worn camera while at work?,
Please read the following statements and decide how strongly you agree or disagree with them.
I think body worn cameras can improve: - Transparency
Accountability Staff behavior Youth behavior Investigations of youth complaints Prosecution of criminal cases Investigation of civil cases Staff training "OPTIONAL:
Is there anything else you would like TJJD leadership to know about the use of body-worn cameras?"

Thank you for the opportunity to complete my research on the use of BWCs in a juvenile corrections environment. There are no published studies on the use of BWCs in corrections in the US, and this research will contribute to a large gap in research.

v/r

David D. Stender
Deputy Director / Facility Safety
1711 San Jacinto Blvd.
Suite 120
Austin, TX 78701

Appendix D Liberty University IRB Request

[External] Open Records Request #37675, Follow up to ORR #37249

Jennifer Martin <
Mon 5/16/2022 09:06
To: Stender, David <

You don't often get email from jennifer.martin@tjjd.texas.gov. Learn why this is important

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

Good morning,

The Texas Juvenile Justice Department (TJJD) Open Records Division has received your open records request for Body-Worn Camera Information. Your request has been entered into our tracking system and assigned a number of 37675. Please use this number when making inquiries regarding your request. Answers to requests are completed an average of 7-10 business days from the date received. Processing time is dependent on record location, document type, and medium of storage. Per Texas Administrative Code §70.3, we may assess fees for copies of records. If there will be a charge for documents, I will notify you in writing.

As permitted by section 552.275, Texas Human Resources Code, TJJD has established a yearly limit on the amount of personnel time spent responding to requests, to include, 36 hours per year beginning September 1, of each year and 15 hours per month. TJJD will charge for costs for all requests if responding to a requestor's requests exceeds the yearly or monthly limit stated above. For more information please refer to section 552.275, Texas Government Code.

If you have any questions, or need additional assistance, please contact me at
or call 512-490-7734.

Jennifer Martin
Records Management Specialist | Program Specialist III
Office of the General Counsel
Texas Juvenile Justice Department
1711 San Jacinto Blvd, Suite 120, Austin, Texas 78701
Post Office Box 12757, Austin, Texas 78711
Office Phone: 512.490.7734 | Fax: 512.451.1787
Open Records Request Phone: 512.490.8455

"Transforming Young Lives and Creating Safer Communities"

Confidentiality Notice: The information contained in this e-mail may be confidential and legally privileged. It

Appendix E TJJD BWC Survey Questions

Variable Name	Question Text
Date	Recorded Date
Email	Recipient Email
Q23	Do you regularly utilize a body-worn camera while at work?
Q24_1	Please read the following statements and decide how strongly you agree or disagree with them. I think body worn cameras can improve: - Transparency
Q24_2	Please read the following statements and decide how strongly you agree or disagree with them. I think body worn cameras can improve: - Accountability
Q24_3	Please read the following statements and decide how strongly you agree or disagree with them. I think body worn cameras can improve: - Staff behavior
Q24_4	Please read the following statements and decide how strongly you agree or disagree with them. I think body worn cameras can improve: - Youth behavior
Q24_5	Please read the following statements and decide how strongly you agree or disagree with them. I think body worn cameras can improve: - Investigations of youth complaints
Q24_6	Please read the following statements and decide how strongly you agree or disagree with them. I think body worn cameras can improve: - Prosecution of criminal cases
Q24_7	Please read the following statements and decide how strongly you agree or disagree with them. I think body worn cameras can improve: - Investigation of civil cases
Q24_8	Please read the following statements and decide how strongly you agree or disagree with them. I think body worn cameras can improve: - Staff training
Q25	OPTIONAL: Is there anything else you would like TJJD leadership to know about the use of body-worn cameras?