UNIVERSITY STUDENT PERCEPTIONS OF BODY-WORN CAMERAS

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A Thesis Submitted to the Faculty of the University of Tennessee at Chattanooga in Partial Fulfillment of the Requirements of the Degree of Master of Science in Criminal Justice

The University of Tennessee at Chattanooga Chattanooga, Tennessee

May 2018

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ABSTRACT

Numerous studies have examined university student perceptions of a plethora of criminal justice related topics. However, there has been no published research on university student perceptions of, or level of support for, the relatively new body-worn camera technology. Using data collected from sample of 244 students enrolled at a midsized southeastern university, this study examined university students' perceptions of body-worn cameras used by police officers. Demographic and educational characteristics, as well as individual-level experiences, were measured for to determine their relationship with student perceptions. Findings indicated that respondents held positive attitudes of body-worn cameras. Perceived inequality in the use of force and academic major emerged as significant predictors of the level of support for body-worn cameras.

DEDICATION

I dedicate this graduate thesis to my late grandfather, Ralph O. Bryant. He was the greatest man I ever had the privilege of interacting with. His success throughout life and the love he showed me is what I attribute my drive for excellence to. I strive every day to be a fraction of the man he was. His memory and the impact he had on my life has brought me to the where I am today. Thank you, granddaddy. I will forever love, cherish, and represent you, and strive to live every day by striving for excellence as you once did.

ACKNOWLEDGMENTS

First of all, I would like to express my gratitude to Dr. Tammy Garland. Aside from being the chair on my thesis committee, she has driven me to an academic excellence I never thought possible for myself. Her persistent efforts of encouraging me to attend graduate school were finally successful a year after my undergraduate graduation, and I never looked back. Without her encouragement, guidance, and occasional scolding, I would never be in the position that I am today. The daily contributions and edits she made on my thesis over the past year have been vital to its completion. I would also like to thank Dr. Vic Bumphus. His rigorous undergraduate research methods course lit the fire of my intellectual side. He challenged me to look beyond the obvious and challenge concepts that had become accepted as social norms. His consistent guidance throughout graduate school has been a blessing to me. Most of all, he introduced and taught me everything about my true passion, research. Dr. Christina Policastro is another individual who has been very important to me throughout my graduate school experience and thesis process. Her knowledge of the criminal justice system and its prevailing issues in unmatched. I can honestly say that she is the brightest individual I have ever had the privilege of meeting and working alongside. Her intellect challenged me daily to better familiarize myself with the criminal justice field. The excellence in research publication she as exhibited throughout her career was paramount to my success. These three individuals have driven me to the brink of excellence. Yet, they showed me that I must cross over it myself. For that, and the guidance they offered throughout my thesis process, I will be forever indebted and grateful for.

I would also like thank my parents. Aside from the constant encouragement they have shown me throughout the writing of this graduate thesis, they exhibited a belief in me that I could accomplish whatever task set before me. My mother has always showered me with love and affection. My father has done everything imaginable, he is the type of man we all strive to be. Whether it be his working three full time jobs while I was child, in which he went four consecutive days every week without sleep to put food on the table, or the willingness to financially support me when most needed, he has always provided. Without them and their support over the years, none of this would have ever been possible. My Gran is also someone who has been key to my success over this time period. Whether it be sending financial support to get some take-out food after numerous days of long hours in the library, or proofreading sections of my numerous papers, she has always been there with a smile. I am truly blessed to have all of the aforementioned people in my life, and their guidance and belief in me is exhibited throughout this thesis in its quality.

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LIST OF ABBREVIATIONS

ACLU, American Civil Liberties Union

BWC, body-worn camera

BWCs, body-worn cameras

CHAPTER I

INTRODUCTION

The need for transparency from law enforcement agencies has never been more evident, nor has it ever been demanded by the public following recent incidents of fatal officer-involved shootings. Instances such as the Ferguson, Missouri shooting of Michael Brown by Officer Darren Wilson have called into question police use of force, transparency, and officer accountability and bias within police departments. As accounts in the Ferguson shooting varied considerably based on eye-witness descriptions, media reports, and investigative agencies' reports, the need to capture the reality of these events and what actually occurred in situations such as this has been noted by both pro- and antilaw enforcement groups. In response to these numerous and highly publicized incidents of questionable police use of force, there has been a push for the implementation of police body-worn cameras (BWCs; Culhane, Boman, & Schweitzer, 2016; Crow, Crichlow, Snyder, & Smykla, 2017). The U.S. public, White House, federal legislators, police officials, police unions, and the ACLU have all voiced the need of BWCs (Wasserman, 2017).

Today, it is imperative that law enforcement agencies are transparent and present information to the community at-large as to the legitimacy of police use of force cases, especially those resulting in fatalities. The implementation of clear policies and the use of technology in police operations are techniques that have been found to ensure police accountability. Such tactics may aid in better crime-fighting capabilities, police accountability, and the enhancement of police-community relations, especially within minority communities (Jennings, Fridell, &

Lynch, 2014). However, caution must be taken prior to reaching the conclusion that technology the all-encompassing answer to the problem. Despite advancements in policy and technology, the public's confidence in the police has not increased over the past three decades and even more so, it has declined among minority populations (Crow et al., 2017). Marginalized groups, especially the African American community, continue to report a lack of confidence in police accountability regardless of advancements within the field (Carter & Corra, 2016). The failure of policy changes and technological advancements to change public perceptions are not surprising as minorities continue to be the disproportionate victims of police brutality (Smith & Holmes, 2003) and traffic stops (Tomaskovic-Devey, Mason, & Zingraff, 2004). As a result, fear of crime is often rivaled by fear of police in many minority communities, as negative police interactions are seemingly inciting what Wasserman (2017) equates to a moral panic.

In response to these often-fatal incidents and negative public perceptions, police agencies have sought to answer the call for greater transparency through the use of body-worn cameras (Jennings et al., 2014). The research BWCs is limited, however, the majority of the extant literature has attempted to examine the effectiveness of BWCs in the field or perceptions of their use. Much of the literature focuses on citizen and officer perceptions including the perceived benefits and drawbacks of BWCs (Coudert, Butin, & Metayer, 2015; White, 2014). However, there is no existing research on the perceptions held by university students in regard to effectiveness and need of implementation. Therefore, to make conclusions and find predictive factors on student perceptions, research on other criminal justice issues must be examined.

This study aimed to address university student perceptions of BWCs at a midsized southeastern university. By surveying university students, it was the intent of this study to explore how demographic and educational factors and individual level experiences/beliefs,

perceived inequality in the use of force impact student perceptions of body-worn cameras. These variables have been shown in the literature to impact perceptions among the general public and students (Chanin & Espinosa, 2016; Lai & Zhao, 2010; Sousa, Coldren, Rodriguez, & Braga, 2016). Younger individuals are more likely to have interactions with the police due to their increased likelihood of criminal activity (Piquero, Jennings, Diamond, & Reingle, 2015). They have also been found to, potentially as a result of a greater likelihood of police interactions, have less confidence in and hold a more negative perception of the police (Williams & Nofziger, 2003). Thus, the perceptions of the understudied college demographic are in need of exploration.

CHAPTER II

LITERATURE REVIEW

Body-Worn Cameras

Research has long established that eyewitness identification and personal accounts, including those of police officers, are often unreliable and biased (Brucato, 2015). Memory can be altered, whether intentionally or unintentionally, and proven insufficient (Dawes, Heegaard, Brave, Paetow, Weston, & Ho, 2015). A potential solution to eyewitness accounts is the implementation of mechanical objectivity; information that can be obtained using video and audio recording cameras (Brucato, 2015). While cameras have been present in police cruisers for decades, there is an increasing call for officers to wear them on their persons (Jennings et al., 2014). According to Brucato (2015), as personal cameras become omnipresent and are being used to document personal interactions including those with law enforcement personnel, recording devices aid in nullifying third party documentation in their own favor, and provide for visibility of police action.

Officer body-worn cameras (BWCs) are relatively small devices used to record interactions between community members (e.g., the public, suspects, and victims) and law enforcement officers. Law enforcement agencies may use both video and audio recordings to demonstrate transparency to their communities; to document statements, observations, behaviors, and other evidence; and to deter unprofessional, illegal, and inappropriate behaviors by both law enforcement and the public (Assistance, 2015). Thus, a BWC for an officer is a visual and

auditory source of evidence of police-citizen encounters that keep police interactions in check by ensuring transparency (Culhane et al., 2016). BWCs have gained support from the public, the federal government, police officials and unions, and groups that are often critical of the lack of police transparency such as the ACLU (Wasserman, 2017). Supporters are hopeful that the use of this new technology will help to improve community relationships, citizen and officer behavior, and transparency issues (Jennings et al., 2014).

Research has indicated that BWCs have the potential to reduce public complaints against law enforcement agencies and police use of force. They can also positively impact the courtroom by providing physical evidence and ensuring prosecution when necessary. Additionally, BWCs have been linked to addressing the public outcry for greater transparency, efficiency, and effectiveness of police conduct (Drover & Ariel, 2015). As a result, the Obama administration dedicated 75 million dollars to BWC programs (Crow et al., 2017). In the fall of 2015, the Bureau of Justice Assistance allotted 19 million dollars in funding to 73 police agencies for enhancing and implementing BWC programs (Sousa et al., 2016).

Police Accountability and Transparency

Community criticism of police accountability and transparency are nothing new as dissatisfaction with law enforcement has been shown to parallel dissatisfaction in a city's police accountability efforts (Hendrickson & Olson, 2015). Carter and Corra (2016) found that less than 40% of respondents have at least a fair amount of confidence in police enforcing the law, while less than 35% have fair confidence in the local police to not use excessive force. Such opinions of police accountability are possibly due to police use of force. In 2008, there were nearly 800,000 uses or threatened-uses of force. Approximately 75% of those individuals involved in the incidents reported they felt the officer(s) acted improperly (Dawes et al., 2015). While a

national database that summarizes statistics on police shootings does not exist, a study by Patterson and Swan (2016) employed a meta-analysis to provide statistical data on police shootings. They found that between the years of 1976 and 1998, there had been approximately 8,578 justifiable killings by police. Additionally, the Bureau of Justice found that there were on average 6.6 complaints per one hundred officers. In New York City alone, there were 42 police-involved fatalities identified, of which only two resulted in an officer indictment. The Centers for Disease Control and Prevention's (CDC) National Violent Death Reporting Systems 2007 statistics indicated that in 16 states, there had been 145 deaths. To increase police accountability, an objective account of police-citizen interaction provided by BWCs could be the answer to the problem at hand (Young & Ready, 2015).

De Angelis and Wolf (2016) analyzed the relationship between satisfaction with police accountability and overall attitudes toward the police. The results of their study indicated that satisfaction with police accountability was directly correlated with predicting overall satisfaction with the police. BWCs have been marketed as an instrument of accountability that is effective in reducing violence, discrimination, and corruption (Coudert et al., 2015). Police leadership view BWCs as an avenue for resolving citizen complaints and prosecuting offenses where victims and witnesses are reluctant to testify (Young & Ready, 2015). This technology allows for the assessment of justification (Dawes et al., 2015), something the public often questions (Culhane et al., 2016). The transparency provided by BWCs is something that is also appealing to police. According to Chanin and Espinosa (2016), governmental transparency is a clear sign of institutional strength and healthy democratic governance. The mere presence of BWCs may promote an increased legitimacy of police in the public eye due to a greater perception of accountability as having every action monitored fosters an inflated sense of responsibility (Ready

& Young, 2015). In response to the findings of the aforementioned studies, police departments have begun to adopt BWCs as a means to provide accountability to the public it serves.

Support for and Critiques of Body-Worn Cameras

BWC technology is relatively new and minimal research has been conducted on their effectiveness. Recent research conducted has been somewhat positive. For instance, Ready and Young (2015) concluded that officers are more proactive without increasing the use of invasive strategies that may threaten police legitimacy. Another study indicated that use of force was two times less likely when an officer had a BWC (Ariel, Farrar, & Sutherland, 2015). Jennings, Lynch, and Fridell (2015) found that officer behavior was positively impacted with the presence of BWCs. Ready and Young's (2015) analysis of how BWCs impacted officer action found that officers with BWCs were less likely to perform stop-and-frisks and make arrests. Officers in this study reported BWCs to be helpful when issuing citations, performing stop-and-frisks, and making arrests. In another study, it was found that the presence of BWCs resulted in a lower mean rate of officer fatalities (Shane, Lawton, & Swenson, 2017).

Overall officer perception has been positive in regard to BWC implementation. Jennings et al. (2014) found that officers were open and supportive to use. Officers in this study reported BWCs were comfortable to wear and perceived benefits in improving the behavior of all involved parties. Jennings et al. (2015), prior to their BWC study, reported that officers were skeptical about BWCs positively impacting their behavior. At the conclusion of the study, however, officers reported their behavior had been positively impacted and were strongly in favor of keeping the BWCs. Young and Ready (2015) also found favor in BWC implementation by officers due to their ability to facilitate accountability through the particular concept of transparency. While a number of studies have shown to have direct benefits with the

implementation of BWCs, others have found limited to no support as brought up by Greenfieldboyce (2017). This does not mean that the use of BWCs is warrantless. As noted in a NPR interview, studies may have not found a reduction of complaints; however, the impact on the police and community relationship is important to consider. Despite the statistics, BWCs are important for the legitimacy of police departments, according Washington D.C. Chief of Police Peter Newsham. To validate the claim, the interview cited a particular incident in which bystanders claimed an officer shot an unarmed man. However, upon of the review of the video provided by the officer's BWC, it was clear the assailant had a knife (Greenfieldboyce, 2017).

Considering citizen-police encounters involve two parties, one would logically assume there is a comparative amount of research on citizen perceptions of BWCs. This, however, is not the case. The existing literature is far from extensive, but there is some on citizen attitudes of BWCs. There is currently, however, no literature on university student perception of BWCs. Nonetheless, literature on other topics has the potential to provide insight into how students may view BWCs. For example, Crow et al. (2017) found that positive perceptions of police performance, as well as more police interactions, were associated with greater perceived benefits of BWCs. Jennings et al. (2015) also found that citizens perceived them positively following their resulting in lower rates of serious complaints. The findings in these studies, combined with studies on student perceptions on other criminal justice issues provide the groundwork for discovering student perceptions.

As much of the extant literature has found, the perceived benefits of BWC implementation have been positive as they provide increased transparency, accountability, legitimacy, and offer evidentiary benefits. However, research has indicated some potentially problematic aspects as well. Notably, officers and citizens have voiced some concerns regarding

the use of BWCs. White (2014) found several perceived concerns, such as citizen and officer privacy, officer health and safety, and the financial commitment required. Coudert et al. (2015) also found that the intrusion of privacy of both ordinary citizens and police were drawbacks associated with the use of BWCs. Other critics have pointed to officer discretion in operating the camera, questioning if the officers will have the ability to turn the device off and on at their own leisure, as well as departmental disclosure of the footage (Brucato, 2015). Officer concerns of BWCs are similar. They worry about the overall effectiveness, the perceived encroachment on police discretion, and the access to and the review of files (Young & Ready, 2015).

BWCs are a technological device intended to offer safeguards to both officers and citizens in their interactions with one another. BWCs offer accountability for their actions, and transparency of how things conspired for involved members (Brucato, 2015). As shown prior, there is a fair amount of research on police perceptions of BWCs when considering how relatively new the technology is. Surprisingly, citizens, on the other hand, have had little attention dedicated to how they perceive BWCs. To truly understand the potential impact BWCs may have on citizen-police interactions, research must examine both sides of encounters. Doing so would provide a clear dialogue of concerns, perceptions, and potential solutions relative to each member of the interaction for researchers to delye into.

Perceptions of the Police

Perceptions of the police and the attitudes towards law enforcement officers are important. Positive perception increases the likelihood of community members working alongside the police in cases, while a negative perception decreases that likelihood. Negative perceptions have repercussions that extend beyond the individual and police, which is a valid and pertinent reason to research these phenomena and develop a solution (Flexon, Greenleaf,

Dariano, & Gibson, 2016). While the majority of individuals have never had a personal confrontation with the police, many of their perceptions are based on the interactions of those they have relationships with or media accounts that they may view as personal. Positive personal experiences with the police have not shown improved trust, yet negative personal experiences have proven to damage an individual's perception of the police in practically every dimension (Boda & Medve-Balint, 2017).

There is consistent evidence showing that personal experiences contribute to negative perceptions and that individuals often are influenced vicariously through family and friends' experiences with the justice system. In analyzing the role of peer arrests and how it helps formulate the attitudes of youth toward the justice system, Fine, Cavanagh, Donley, Steinberg, Frick, & Cauffman (2016) found that a combination of personal and witnessed or storied encounters impacted individual perception of the justice system. Individuals, who had friends that had been arrested, reported a more negative perception of the justice system, despite their own interactions with the law. Moreover, personally witnessing the arrest of a friend resulted in a greater level of disapproval with the justice system and created an extremely negative perception as a result. A study by Nivette, Eisner, Malti, and Ribeaud (2015) found that those who identified alongside a peer group generally deemed as delinquent had a more negative perception of the justice system independent of personal interactions. Fagan and Tyler (2005) found that those delinquent peer groups involved in antisocial activities had a more negative perception of the justice system as their frequent contact with the justice system left them loathing it (Fine et al., 2016). While not noted, it is possible that these individuals' perceptions were influenced by the fact they deemed arrests to be unnecessary or that excessive force was used.

The majority of research on attitudes and perceptions of the police has focused on that of the general population. According to Boda and Medve-Balint (2017), perceptions of police performance and police fairness have a significant impact on an individuals' perspective of a country's current affairs. They found that perceptions about police effectiveness and procedural fairness are the most influential factors in trusting the police within an established democracy. Fair procedures, as well as effective police performance used by the police in their interactions with citizens increase overall cooperation. Victims, when feeling they have been treated in a procedurally fair manner, are more likely to have positive perceptions of police legitimacy and the criminal justice system as a whole (Koster, Kuijpers, Kunst, & Van der Leun, 2016).

Citizens that feel very safe in their homes indicated having maximum satisfaction with the police according to Afon and Badiora (2016). Satisfaction, in turn, decreases as residence goes form low-density neighborhoods to high-density neighborhoods. A study conducted in a city in Nigeria found that satisfaction with the police was generally low for residents. The researchers concluded that factors influencing perception of police were level education, income status, and age (Afon & Badiora, 2016). One study, using a sample of police officers, sought to discover what perceived factors impact citizen perception. Results showed that media coverage, particularly hostile media coverage, significantly affect citizen perception of the police (Nix & Pickett, 2017). Simpson (2017) found that factors such as being in uniform rather than plain clothes, riding a bicycle, and apparent demeanor drastically impact citizen perception of the police.

While the public's confidence in the police has remained relatively stable over the past thirty years, it has declined for some populations of color (Crow et al., 2017). African Americans and Hispanics are significantly more likely to perceive bias in the criminal justice system

(Wright & Unah, 2017). As noted, high profile media coverage, along with a perceived increase in minority shootings, have resulted in a continued skepticism of the police within minority communities. These factors, coupled with the disproportionate targeting of minority and lower-socioeconomic areas deemed as "hot spots" has led to an increasing perception in the decline in police accountability and transparency. In a study assessing the targeting of minority drivers, "driving while black" was found to be a legitimate issue in many jurisdictions. During traffic stops, African Americans were more likely to be subject to aggressive policing with high levels of interrogation and searching (Tomaskovic-Devey et al., 2004). Chanin and Espinosa (2016) found that 70% of African American respondents believed that police do a poor job of holding officers accountable when instances of misconduct occur. Smith and Holmes (2003) state that police-minority tensions are a result of the enduring racial and ethnic divisions that exist in American society.

Excessive use of force epitomizes the tension between minority citizens and police (Smith & Holmes, 2003). According to Patterson and Swan (2016), young male officers are more likely to use force and their victims tend to be African American. Race is strongly associated with opinions for and against use of force with only 30% of Americans believing that whites and blacks are treated equally in this regard by police (Carter & Corra, 2016). Shane et al. (2017) found that when controlling for rates of race in a population, blacks were two times as likely to be fatally wounded in police interactions. The authors argue that the use of deadly force against black people is a standard practice that is woven into the fabric of American society. The results are fairly conclusive in this opinion as their data revealed that one black person is killed at the hand of police ever 28 hours.

Peck (2015) indicated a need for more qualitative research regarding citizen perceptions, which Feinstein (2015) offers in her study of police interactions and disproportionate minority contact. Thus, the introduction of the use of body-worn cameras by police officers could be an informative data tool given that video recordings from BWCs offer in-depth, personal-oriented data that Peck (2015) argues is needed. Feinstein (2015) examined the causes of disproportionate representation of minorities within the juvenile justice system using a qualitative research process; conducting in-depth interviews of thirty male juveniles within a correctional facility. Feinstein found a consistent belief amongst this marginalized group that officers of the law gave whites more leniency than minorities. Additionally, study participants felt that their families' reputations were considered, increasing the likelihood that unnecessary force would be used against them (Feinstein, 2015). Engen, Steen, and Bridges (2002) maintained that race proceeds all other mediating factors, such as socioeconomic status, sex, and age, in regard to influencing the outcome in the juvenile justice system. Overrepresentation amongst blacks and Hispanics within the juvenile justice system has become a widely accepted phenomenon (Feinstein, 2015). This discrepancy in racial interaction and incarceration may have a significant impact on the perception of BWCs for students due to the mechanical objectivity they provide.

Much of the perceived disparity in treatment of minorities by criminal justice professionals has been attributed to the underrepresentation of police officers from groups deemed as other. For instance, police officers at the local level predominately consist of white males. At the federal level, only approximately one-third of law enforcement officers are a member of a racial or ethnic minority group. Unequal representation has helped create a perceived atmosphere of discrimination against marginalized groups within the criminal justice system (Greene & Gabbidon, 2009). Innate distrust of the police force within minority

communities, as they are proponents of a class different than that of their own, yields a lack of cooperation with the police (McNeeley & Grothoff, 2016). As a result, minorities may feel oppressed simply because the enforcers of law in their area share neither their skin color nor their cultural understanding (Greene & Gabbidon, 2009). Consistent with Feinstein's (2015) study, this may be a result in minorities who are involved in the justice system primarily interacting with white police officers. As indicated by Feinstein (2015), the fact that police officers are primarily white has a lasting effect on perceptions of the police force by the black community. McNeely and Grothoff (2016) stated a similar position in their study assessing the impact racial tension has on attitudes towards police. They found that the police force being primarily made up of white police officers, influences minority perception. It is perceived by the black community that, for this reason, the police force is a system that caters to the whites. Research has indicated that race, alongside other factors, has a clear impact on minority perceptions of why police officers stopping them (Flexon et al., 2016). A potential solution, according to Coon (2016), is better training of white officers in cultural aspects of marginalized races to better equip them, as well as make them more knowledgeable before going into interracial interactions with legal implications.

Wilson and Taub (2007) define racial tension as "the degree to which community members resent or feel threatened by specific groups of people within the community based on racial status" (p. 386). Furthermore, McNeely and Grothoff (2016) went on to more-or-less state that the perceived lack of control of ones' future is what creates the aura of racial tension. In this study, it is noted that individual-level perception is most often positive, yet a variable that has a great influence on perception is none other than race. Perception of the police differs greatly from whites and blacks. Blacks perceive a significantly greater amount of neighborhood-level

police misconduct than Whites (Sethuraju, Sole, Oliver, & Prew, 2017). McNeeley and Grothoff (2016) assumed that neighborhoods with high levels of racial tension would have a more negative attitude towards the police in their study. They found in this study that communities, and its members experiencing racial tension, had a negative attitude towards the police. Thus, at the early stages, it is unknown if BWCs will influence minority perceptions of the police. Crow et al. (2017) have found that young, non-white respondents are more likely to perceive the benefits as not applying to them in regard to BWCs. Younger populations, such as university students, are an understudied group in criminology. Little research has been directed at discovering their perceptions of the criminal justice system. That which does exist, however, highlights the importance of directing studies toward it.

Chow (2011) believes that research into the relationship between police and young people is of vital importance, due to the frequent and often negative interactions between the two. Although there is limited research on the perceptions held by university students regarding the police, research indicates that college students hold less positive attitudes towards police than that of their older counterparts (Boateng, 2016). This is even more so for individuals of color at the collegiate level. Race has been discovered to be the single most predictive factor of college students' attitudes towards law enforcement. Regardless, it was found that suspect race and ethnicity did not actually affect college students' perceptions of police use of force (Girgenti-Malone, Khoder, Vega, & Castillo, 2017). As prior research has indicated, minorities are more likely to experience police use of force in encounters with the law (Smith & Holmes, 2003), and it can be assumed that BWCs monitoring interaction could alleviate the distrust of officers held by minority university students. Research has shown that BWCs can show police legitimacy (Ready & Young, 2015), which is a vital component of the relationship between students and

police (Chow, 2011), as well as an issue that campus police struggle with. Furthermore, university students often report that campus police overreact to particular circumstances (Jacobsen, 2015). In a study conducted on students across numerous age groups, control and surveillance were identified as vitally important to students at their respective campuses (Booren & Handy, 2009).

Little attention has been allotted to university student perceptions of the police. The research that has studied it has focused on demographic characteristics, crime victimization, personal safety, fear of crime, contact with the police, and police behavior. Boateng (2016), in a study conducted at one large university in Ghana, found that students have moderate trust in the police. Vicarious experiences of police corruption, level of education, ethnicity, and marital status predicted students' trust in the police as well as influenced their perceptions of fairness and effectiveness. Chow (2011), in a study with a student sample of 321, found that students generally have a positive attitude toward police. Canadian students were found to have relatively positive views of the police; factors including socioeconomic status, contact with the police, personal safety, crime victimization, and police harassment were found to be very influential in terms of their effects on student attitudes. More specifically, this study found that students who rated police performance favorably indicated satisfaction in specific areas. These areas included their personal safety, a higher socioeconomic status, no prior crime victimization, and positive contact with police. Similarly, Williams and Nofziger (2003) found that students who feel safe in their neighborhoods are more likely to have confidence in the police.

Fear of crime, a significant factor in shaping perception, has made up much of the prior research on student perception (Chow, 2011). Wu and Sun (2010) found that there is negative relationship between the fear of crime and dimensions such as police fairness and integrity. Also

discovered in their study, was that students who expressed being afraid of crime also indicated they viewed the police to be unfair in citizen dealings and that the police lack integrity. Similar to the findings of Chow (2011), Avdija (2010) also found that students from higher socioeconomic statuses evaluate the police in a more favorable manner. In contrast to aforementioned studies, Williams and Nofziger (2003) found two differences: First, younger students tend to have less confidence in police, and secondly, students have a less favorable attitude toward police than regular citizens.

Consistent with prior research on gender and attitudes toward the police (see Lai and Zhao, 2010), male students, in general, tend to have less favorable attitudes of the police than females (Williams & Nofziger, 2003; Wu & Sun, 2010); female respondents tend to be more likely to perceive police more positively than their male counterparts. As noted by Brown and Reed Benedict (2002), this may be a result of females having significantly fewer interactions with the law than males. Boateng (2016) found that alongside vicarious experiences of corruption, gender had a significant effect on perception of the police. Avdija (2010) found that male students from higher socioeconomic backgrounds were also more likely to evaluate the police in a favorable manner. Male students are also more likely to view a search as less intrusive and more reasonable than their female counterparts.

A students' major has shown to have significant impact on their perception of criminal justice system matters. Criminal justice majors, in particular, have shown to be more likely than other majors to perceive searches as reasonable (Mackey & Smith, 2012). Race-specific multivariate linear regression models have shown that major impacts student perceptions differently depending on race. White, criminal justice majors perceive significantly less general police misconduct than Whites majoring in other fields. Non-White, non-criminal justice majors

perceive significantly more general police misconduct than their criminal justice major counterparts (Sethuraju et al., 2017). It can be logically assumed, from studies as these, that major will be significant in determining student perceptions of BWCs as well.

Clearly indicated throughout is that studies on student perceptions in general are lacking. Studies analyzing university student perception of BWCs are non-existent, and it is the goal of this study to provide that. University students generally perceive the use of technology positively (Davies, Lavin, & Korte, 2009). Therefore, one could logically assume that they will feel the same about BWCs. Boateng (2016) found that corruption in the police force was associated with students having a negative perception of the police. Corruption is the trait of an entity that is not transparent. The transparency that BWCs provide may then offer students a visible account, and subsequently result in more positive perceptions for students. Students share some demographically statistical similarities in data with citizens when accounting for race, gender, and drug policy perceptions. It is possible, though unknown, that they may share similar perceptions with citizens in regard to BWCs. The goal of this study is to answer these questions and discover university student perception of BWCs.

CHAPTER III

CURRENT STUDY

Although there have been a number of studies addressing university student perceptions of criminal justice issues (e.g., Garland & Bumphus, 2012; Garland, Bumphus, & Knox, 2012; Gray & Brown, 2009), there has been a limited amount of research focusing on student perceptions of issues within domestic policing agencies (Boateng, 2016). More specifically, there is a paucity of existing literature examining perceptions of BWCs and none to date on university student perceptions of BWCs. While research on perceptions of BWCs exists, the literature has focused on law enforcement and citizen perceptions. Thus, this study aims to fill this gap in the literature and examine university student perceptions of BWCs. Demographic and educational characteristics as well as individual level experiences and attitudes will be examined to determine their relationship to BWC perceptions. Specifically, this study will address the following questions:

- 1. What individual level characteristics (demographics, education, and interactions with the criminal justice system) influence students perceptions of BWCs?
- 2. Does university student perceptions of disparate use of force affect their perceptions of BWCs?

Methodology

Using a convenience sample of students at a mid-sized southeastern university, a survey instrument was administered to selected classes during fall 2017 to address university student

perceptions of body-worn cameras. Selected faculty agreed to allow the research team to distribute surveys to the selected undergraduate classes. The sampled population consisted of individuals enrolled in criminal justice and general education classes who were at least 18 years of age or older, which is in compliance with the standards established by the university institutional review board. A total of 273 students agreed to participate in the study; 29 cases were excluded from the final analysis due to missing data on Likert Scale items resulting in a final sample of 244 students for this exploratory analysis.

The 38-item survey instrument was divided into two segments. The first portion of the survey instrument asked respondents basic individual level demographic and educational questions (age, sex, race, relationship status, major, religious attendance, etc.). The majority of the sample was female (64.3%) with a mean age of 20.5. and 78.4% of the sample identified as white (see Table 1). The sample was demographically representative of the university population as the majority of the students were female (55.7%) and white (76.4%), yet unknown for other traits. Additional questions within this section addressed the student's level of interaction with the criminal justice system (personal and family interaction) including negative and positive experiences with the police, arrest, and incarceration. The second portion of the survey instrument included six categories addressing perceptions of body-worn cameras with statements assessing respondents' perception of each question. For each Likert scale item, each participant was asked to rate his or her agreement with each item on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Table 1 Description of Variables (n = 244)

Variable and Coding	Distribution and Descriptive Findings			
Sex (Male=0)	Male = 35.7%; Female = 64.3%			
Race/Ethnicity (White = 0)	White = 78.4%; Non-White = 21.6%			
Classification (Freshman = 1)	Freshman = 51.9%; Sophomore = 11.1%;			
	Junior = 15.6%; Senior = 21.4%			
Major (Criminal Justice = 0)	Criminal Justice = 29.1%; Non-Criminal			
	Justice = 70.9%			
Negative Experiences (No = 0)	No = 87.2%; Yes = 12.8%			
Family Member Sent to Prison/Jail (No = 0)	No = 45.7%; Yes = 54.3%			
Perceived Inequality (Strongly Disagree = 1)	Strongly Disagree = 7.0%; Disagree =			
	13.1%; Neither Agree or Disagree = 23.4%;			
	Agree = 30.3%; Strongly Agree = 18.9%			
Student Perceptions of BWCs	Range = 17-45; $M = 34.88$; $SD = 5.55$			

Dependent Variable

Using data reduction, a summary index was constructed to measure student attitudes about perceptions of body worn cameras. As illustrated in Table 2, the scale was made up of nine composite Likert scale attitudinal questions assessing whether students were likely to agree or disagree with the survey statement. Higher scores indicated that students had more positive attitudes toward the use of BWCs (POSITIVE). Of the nine questions comprising the index

scale, responses indicated positive attitudes regarding the use of body worn cameras as a whole (see Table 2). The vast majority agreed that it would improve both citizen and police behaviors. But notably, over 30% of respondents were unsure (neither agree nor disagree) that police use of BWCs would reduce citizen and departmental complaints and police shootings. The index had a high level of internal consistency with a Cronbach's alpha coefficient of .846.

Table 2
Attitudinal Scales and Agreement

Attitudinal Scales	% Agree/Strongly Agree				
Student Perceptions of BWCs (α = .846)					
Police departments should adopt BWCs for all front-line police officers.	89.4%				
Wearing a BWC would improve police officer's behavior in the field.	84.5%				
Wearing a BWC would improve the behavior of citizens in police interactions.	56.3%				
I would feel safer if police officers wore BWCs on duty.	69.1%				
Wearing a BWC would reduce use of force against citizens.	68.1%				
Wearing a BWC would reduce the number of citizen complaints.	54.5%				
Wearing a BWC would reduce the number of departmental complaints.	56.0%				
Wearing a BWC would increase the likelihood that police would behave by the book.	81.5%				
Wearing a BWC would reduce police shootings.	50.0%				

Independent Variables

Consistent with other research conducted on student perceptions, variables that have been shown to have an impact on perception have been measured in this study such as sex, race/ethnicity, and others (Avdija, 2010; Boateng, 2016; Williams & Nofziger, 2003). The

independent variables consist of demographic and educational factors as well as individual level experiences and perceptions that influence the dependent variable. Demographic information included sex (0 = male, 1 = female) and race/ethnicity (0 = White, 1 = non-White). Race/ethnicity was originally coded White (non-Hispanic) (0), Black/African American (1), Hispanic/Latino (2), Asian (3), Native American/Alaskan Native (4), Multi-Racial (5), and other (6) which included an area to specify. Due to a limited number of responses among non-White participants, race/ethnicity was dummy recoded into a dichotomous variable. Educational variables were also used in the analysis: student classification (1 = freshman, 2 = sophomore, 3 = junior, 4 = senior) and major (0 = criminal justice, 1 = non-criminal justice). Major was collected using an opened-ended question, but for the current study was also recoded into a dichotomous variable for data analysis. Current individual level experiences/beliefs were examined as well: Negative experiences with the police (1 = strongly disagree, 2 = disagree, 3 = neither agree or)disagree, 4 = agree, 5 = strongly agree), family history of incarceration (0 = no, 1 = yes), and perceived inequality in use of force (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree).

Analytic Plan

The analyses for this study were conducted in steps. First, at the bivariate level, the relationships between the independent variables and the dependent variable were analyzed to determine bivariate associations between each independent variable and the dependent variable. Next, an ordinary least squares (OLS) multiple regression analysis was conducted to determine the relationship between the dependent variable and each independent variable while controlling for all of the other variables in the model. In the model, sex, race/ethnicity, classification, major, negative experiences with the police, family member sent to prison/jail, and perceived inequality

were regressed on the dependent variable, positive perceptions of BWCs. OLS was chosen based on its simplicity and ability to predict the dependent variable from the independent variables.

Results

The majority of the sample was female (64.3%) and White (78.4%), which, as noted, is representative of the population in which the sample was drawn. Respondents perceived racial inequality in police use of force, with 49.2% agreeing or strongly agreeing "police officers use an excessive amount of force against minorities as compared to whites." Student classification resulted in an overrepresentation of freshman; however, as general education classes were sampled, this was expected. The distribution in class ranking was relatively spread out, with sophomore being the least represented; freshman (51.9%), sophomore (11.1%), junior (15.6%), and senior (21.4%). Also, the analysis examined respondents' major, which yielded more non-criminal justice majors (70.9%) than criminal justice majors (29.1%). The overrepresentation of freshmen and non-criminal justice majors was expected as general education courses were sampled and non-majors often enroll in all of the criminal justice courses sampled due to their popularity on the sampled campus.

Using a bivariate analysis technique, correlations were examined to determine the relationships between all of the independent variables and the dependent variable (see Table 3). Contrary to previous research (Boateng, 2016; Engen et al., 2002), demographic variables were found to have no significant relationship with university student perceptions of BWCs. Major, however, demonstrated a statistically significant relationship with perceptions of BWCs (r = .214; p < .01). Thus, non-criminal justice majors were found to be more likely to positively view BWCs than criminal justice majors. Perceived inequality was also determined to have a statistically significant relationship with perceptions as well (r = .235; p < .01). Those who

perceived inequality in use of force incidents were more likely to have positive perceptions of the use of BWCs.

Table 3

Bivariate Analyses for University Student Perception of BWCs

	(X1)	(X2)	(X3)	(X4)	(X5)	(X6)	(X7)	(Y1)
(X1) Sex	-	-	-	-	-	_	_	-
(X2) Race	.025	-	-	-	-	-	-	-
(X3) Classification	141*	054	-	-	-	-	-	-
(X4) Major	.164*	.120	339**	-	-	-	-	-
(X5) Negative	049	078	.042	.056	-	-	-	-
(X6) Family	.039	.087	.025	026	.052		-	-
(X7) Perceived	.305**	.238**	004	.199**	.026	.035	-	-
(Y1) BWC	.125	.093	118	.214**	.068	010	.235**	-

^{*}*p* < .05; ***p* < .01

OLS regression analysis was conducted to determine the relationship between the independent variables and BWC perceptions. Sex, race, classification, major, negative experiences with the police, family member sent to prison or jail, and perceived inequality were regressed on the dependent variable: BWC perception (as illustrated in Table 4). The model was found to be significant (F = 2.817; p < .01), explaining approximately 8% of variance ($R^2 = .082$). The two independent variables that indicated a statistically significant relationship in the bivariate analysis remained significant in the regression analysis. Perceived inequality was found to have the strongest association with the dependent variable and was a statistically significant

predictor (b = .164; p < .05). Simply, the more inequality in minority citizen-police interactions one perceives, the greater likelihood that they positively perceive the implementation of BWCs. Major was also found to be a statistically significant predictor (b = .147; p < .05) within the model. As noted, non-criminal justice majors were determined to be more likely to hold positive perceptions of BWCs than criminal justice majors, holding all else constant in the model. While there was no difference in the bivariate and multivariate results, it should be noted that the confidence interval for both variables decreased from a .01 to a .05 significance level when controlling for other variables in the multivariate analysis.

Table 4

OLS Regression Analysis of University Student Perception of BWCs

	Model 1 BWC Perception	
Variable		
	β	Std. Error
Sex	.044	.785
Race	.035	.904
Classification	039	.307
Major	.147*	.836
Negative Experience	.059	1.092
Family Prison/Jail	048	.714
Perceived Inequality	.164*	.342
R^2	.082**	
F	2.817**	
$*n < 05 \cdot **n < 01$		

^{*}*p* < .05; ***p* < .01

Discussion

In the current exploratory study examining university student perceptions of BWCs, it was found that respondents held positive attitudes of BWCs. The dependent variable was comprised of 9 Likert Scale items addressing support for BWCs, and subsequently compiled into a composite variable. Results yielded a mean response of approximately 4 (4 = agree), for students, on the 5-item Likert scale. At least half of the students in the sample agreed or strongly agreed with the statement on each of the 9 Likert scale items. More specifically, respondents agreed or strongly agreed that: police departments should adopt BWCs (89.4%), wearing a BWC

would improve police officer's behavior in the field (84.5%), wearing a BWC would improve the behavior of citizens in police interactions (56.3%), they would feel safer if police officers wore BWCs on duty (69.1%), wearing a BWC would reduce use of force against citizens (68.1%), wearing a BWC would reduce the number of citizen complaints (54.5%), wearing a BWC would reduce the number of departmental (internal) complaints (56.0%), wearing a BWC would increase the likelihood that police would behave by the book (81.5%), and wearing a BWC would reduce police shootings (50.0%). Notably, of the variables regressed on the dependent variable, only two were found to be statistically significant predictors within the model: perceived inequality and academic major. Students that viewed inequality in the use of force were more likely to be in favor of BWCs. Academic major was also determined to be a statistically significant predictor of BWC perceptions. Non-criminal justice majors were more likely to perceive BWCs more positively than criminal justice majors.

Perceived inequality in the use of force and major having shown significance in this study resembles findings published in previous literature. Prior research has indicated that approximately 70% of citizens believe that force is used disproportionately amongst Blacks and Whites (Carter & Corra, 2016). Similarly, only 20.1% of respondents in this study disagreed/strongly disagreed that there is inequality in the use of force. Girgenti-Malone et al. (2017) found that a suspects' race did not affect college students' perception of the justification of police use of force. Perceived inequality having significant association with positive BWC perception in this study may be due prior research findings' indication that BWCs can reduce complaints for use of force (Drover & Ariel, 2015). College major has been found in prior research to be a significant predictor in attitudes (Garland et al., 2012). Criminal justice majors have been shown to perceive less general police misconduct (Sethuraju et al., 2017), deem

searches more reasonable (Mackey & Smith, 2012), and hold less punitive attitudes towards police. The results of the current study aligned with others that found non-criminal justice majors hold more punitive views (Garland & Bumphus, 2012).

While there has been no previous research examining university student perceptions of BWCs, the findings are consistent with studies on student perceptions of other criminal justice issues. Non-criminal justice majors have consistently revealed more punitive attitudes and perceived greater levels of inequality in the application of criminal justice policies and laws (Garland et al., 2012). Samples drawn from student populations have shown lack of confidence in and less favorable views of police (Williams & Nofziger, 2003), as exemplified in this study by the favor in BWCs. Results also show similarity to studies on citizen perception of BWCs. The extant literature has found that citizens had a positive perception of BWCs (Crow et al., 2017; Jennings et al., 2015). The positive perceptions of BWC found here suggest students maintain a desire for greater transparency in police procedures (Hendrickson & Olson, 2015). This is likely due to the sample being primarily comprised of non-criminal justice majors (70.9%) and the perception that inequality exists in the use of force (49.2% agree/strongly agree), two variables that have shown association with one another in prior literature (e.g., Sethuraju et al., 2017). It was evident, as well, that students in this study largely shared a similar perspective as citizens and students previously sampled in criminal justice-related research that inequalities exist within the criminal justice system (e.g., Feinstein, 2015).

Consistent with most extant literature (e.g., Smith & Holmes, 2003), respondents in this study indicated that police are more likely to use force against minorities than whites (49.2% agree/strongly agree). As noted by Feinstein (2015), minorities are often treated differently than whites in police interactions. This analysis also found that the relationship between perceived

inequality and perception of BWCs was significant (b = .164; p < .05). Those who perceived inequality in police use of force were more likely to be in favor of the use of BWCs. One might conclude that minorities being treated differently than whites has led to respondents being in favor of BWCs as a potential solution to police transparency and accountability issues. Thus, the finding that those who perceive inequality in police use of force held more positive perception of BWCs was critical to the findings as regressing perceived inequality across BWC perception has not been previously considered. A large portion of society, particularly minority populations, believe that officers are scarcely held accountable when misconduct occurs in minority citizen-police interactions (Chanin & Espinosa, 2016). Thus, one can argue that the use of BWCs can increase both transparency and accountability of police departments (Culhane et al., 2016).

The extant literature has shown that race is often the single most predictive factor in determining college student perceptions on criminal justice issues (Girgenti-Malone et al., 2017; Engen et al., 2002). More specifically, Blacks and Whites have different perceptions of the criminal justice system (e.g. Wilson and Taub, 2007). This study, however, did not find race to be a predictor in college student perceptions. While Whites represented the majority of the sample (78.4%), the racial breakdown of the sample was representative of the sampled university population. Despite finding no association between race and BWC perception, race did show significance elsewhere. Race was found to have correlation with perceived inequality. Bivariate correlation analysis results showed that being White indicated perceiving less inequality in use of force (r = .238; p < .01). This depicts how minorities, particularly Blacks and Hispanics, are significantly more likely to perceive bias in the criminal justice system (Wright & Unah, 2017).

Minorities are more likely to perceive more general police misconduct (Sethuraju et al., 2017), as well experience use of force by the police (Smith & Holmes, 2003).

Minorities perceiving inequality, yet not indicating support for BWCs is unexpected and in need of further analysis in future research. Despite race showing no correlation to BWC perception in this study, as prior research strongly indicated it would (Wilson & Taub, 2007), the observation of racial inequality or bias in terms of treatment showed significant association (Garland & Bumphus, 2012). This is may be due to non-white and younger respondents' perception of BWC benefits not applying to them (Crow et al., 2017), or the characteristics of the sample population. Garland and Bumphus (2012) found similar results to the current study in their study on student attitudes. Race showed no association with attitude in their study, but the perception of racial bias was found to be a significant predictor of attitudes. They allotted this to the possibility that better educated individuals hold less punitive points of view. As the sample population of this study closely resembles theirs, it is possible the same explanation applies.

Academic major was also determined to be a significant predictor of positive perceptions of BWCs. The sample of this study was gathered from criminal justice-based classes, and academic major was broken down into criminal justice and non-criminal justice for this reason. Much of the existing research on student attitudes of criminal justice issues has also been broken down in this fashion, and this research mimicking that strengthens both it and the prior literature. The sample was not overrepresented by criminal justice majors (29.1%). Having an overrepresentation of criminal justice majors in studies has often shown to skew results, due to these students having better familiarity with the system and its prevalent issues (Garland et al., 2012). Criminal justice majors are well versed in the issues of the field. Yet, criminal justice majors (b = .147; p < .05), in this study, did not perceive BWCs as positively in comparison to

their non-criminal justice major counterparts. Possible explanations for this are factors indicated in prior literature such as the lack of support for technology (Rabe-Hemp, Gokhale, & Woeste, 2013) and the perception of less inequality held by criminal justice majors (e.g., Garland et al., 2012). Non-criminal justice majors did indicate perceiving more inequality at the bivariate level in the current study (r = .199; p < .01).

Prior research has found that criminal justice majors are less likely to support technological implication than other majors. Criminal justice majors have perceived more societal harm than benefit from technology (Rabe-Hemp et al., 2013). Another likely reason is criminal justice majors perceiving less inequality than non-criminal justice majors. Bivariate correlation in this study did indicate that non-criminal justice majors are more likely to perceive inequality (r = .199; p < .01). It may also be the result of a spurious factor such as the sample being primarily white (78.4%). These findings were concurrent with Sethuraju et al.'s (2017) results. Their study indicated that white, criminal justice discipline majors perceived significantly less police misconduct, while multiracial, non-criminal justice discipline majors perceived significantly more. Therefore, majoring in criminal justice decreases one's likelihood of perceiving police misconduct, and is likely the reason that non-criminal justice majors showed more support of BWCs in the current study.

In general, college students hold less punitive views as a group as compared to other groups. The more education one receives, the less punitive views they hold. Geographic location of universities has also shown to impact punitive attitudes, with those in the south holding more punitive views. Historically, though, it has been argued that criminal justice majors are more hold more punitive views. Yet, in recent years, studies have found mixed results in that regard (Shelley, Waid, & Dobbs, 2011). Garland et al. (2012) found that criminal justice majors held

less punitive attitudes toward marijuana use. Another study found that criminal justice majors are more punitive, but that the predictors of their punitive attitudes were being Hispanic, political ideology, and fear of property crime. Punitive attitudes, therefore, were not actually related major itself (Shelley et al., 2011). It could be assumed that the sample of the current study had low levels of familiarity with and education on the criminal justice system, over half of the sample is freshman (51.9%) and a non-criminal justice major (70.9%), which led its more punitive attitude. Based on the findings of this study and others, combined with the fact that more education leads to less punitive attitudes, it is logical to conclude that the focus on the criminal justice system in the criminal justice curricula has resulted in the less punitive views held by criminal justice students about BWCs.

Research has shown that vicarious experiences with the police impact perceptions held at the individual level (Sethuraju et al., 2017). Negative interactions with the police have shown to result in negative perceptions (Flexon et al., 2016). This study had a low representation of respondents having negative interactions (12.8%), and it had no association with BWC perception. As indicated in other studies (e.g., Nivette et al., 2015), however, few individuals have personal interaction with the police at a personal level. They, instead, develop their opinion based on peer interaction. Despite a little over half of the sample revealing they had a family member sent to prison or jail (54.3%), it showed no correlation with perception. This is in contrast with prior literature that found peer interaction with the criminal justice system is a strong predictor in negative perceptions (Fine et al., 2016). The lack of interaction, or even the opinion that such will never occur in any capacity, with police may have serious impact on the perceptions held by university students due to their education.

Nonetheless, a possible explanation for the findings of this study is that educational attainment rather than major, demographic factors such race, or individual level characteristics is the most telling and predictive variable. Education is associated with higher socioeconomic status, which is in turn associated with lower likelihood of criminal activity and less interaction with the police (Yull, 2015). It also influences satisfaction with the police (Afon & Badiora, 2016). This could be a reason for sex, race, and familial interaction with the criminal justice system showing no association in this study. Individuals pursuing education feel that they have prepared themselves adequately enough that such labels will not hinder them nor apply to them in reference to systemic interaction (Koski, 1996). Race as a variable for university students is not as simple as Black and White. Education elevates ones' societal position and could result in even minority groups having stereotypical views of different groups (Garland & Bumphus, 2012). By this reasoning, individuals of differing races would not perceive a greater need for BWCs due to citizen-police interactions not directly applying to them. Even though race is not predictive of attitudes for students, they still perceive racial inequality existing in the system and seek solutions such as BWC implementation.

Limitations

The significant findings in this study expand on the existing literature and provide insight into perceptions which ultimately affect interactions, but these findings must be considered in light of the current study's limitations. As with most studies drawn from college campuses, the data from this exploratory study are cross-sectional and uses convenience sampling. As noted within the literature, the failure to utilize probability sampling techniques has expected limitations of representativeness, generalizability, and sampling bias (Garland et al., 2012). As noted, survey respondents were from classes in which instructors volunteered their participation,

and students were given the option to participate. Since the survey only sampled general education and criminal justice courses at one southeastern university, generalizing these findings to other universities may be problematic as other factors may influence student attitudes towards the use of BWCs. Various universities may offer differing opinions on social issues dependent upon the ideas and philosophies of the university they attend as well as the professors they have (Garland & Bumphus, 2012). Additionally, the findings cannot be generalized to samples outside of the university setting.

Caution should be used when applying these findings. Jennings et al. (2015) have noted that it is often difficult to detect statistical significance with smaller sample sizes. As the results of the sample were derived from a relatively small sample (n = 244), we must be careful in our application of these findings. Another factor is that race was measured as a dichotomous variable, which has been found to be misleading "when conducting inferential or predictive analysis" (Garland & Bumphus, 2012, p. 157). Garland and Bumphus (2012) pointed to in their research that race is not always clear cut, and that even minority groups may perceive groups as "other". In this line of thinking, it may be relevant to assess perception of self in future research to see if that could be the case for the university students' perception of BWCs. Other research (e.g., Boateng, 2016) indicated that fear of crime is the most relevant factor in determining college student perception, which may have merit in future research on this topic as well.

Finally, while this survey was adapted from the work of Jennings et al. (2015), future researchers delving into this topic may choose to measure the attitudinal scale variables differently. Perceived inequality, for example, could be better conceptualized to include stop-and-frisks as well as arrests rather than just use of force. After much discussion and review of prior literature on perception of criminal justice-related issues, the variables used were chosen

based on their application to the study. Nonetheless, as this study is exploratory, it is possible there is a more appropriate or accurate way to measure these variables.

Conclusion

Police use of force including officer-involved shootings (e.g., Michael Brown and Walter Scott) has brought into question police accountability and transparency, resulting in the public having greater support of BWC implementation (Culhane et al., 2016). Overall, the respondents of this study indicated support for BWCs. Perceived inequality in the use of force and major were found to be statistically significant predictors of university student perceptions of BWCs. A low number of respondents reported having had personal interaction with the police, as prior research said would be the case, yet students still were in favor of BWCs. Therefore, a valid conclusion as to why could be that their opinions have been constructed via peer interaction and/or media coverage. An exemplary case of media coverage, in which the transparency and accountability associated with BWCs was on display, is the case of Jordan Edwards, a 15-yearold Texas teenager who lost his life in a police shooting. After the review of the video from incident, the officer was wearing a BWC, it was concluded the officer acted very inappropriately. As a result of the documentation provided by the BWC, the officer was terminated and has been charged in the death of the teen (Stack & Hauser, 2017). Cases such as these may impact student perception of BWCs as well as their perception of racial inequality in use of force.

This study set out to discover university student perception of BWCs and use of force.

Demographic and educational factors, as well as individual level influences and perceptions, were the independent variables used to discover relationship with and give directionality to perception. While limited in some facets, the data accumulated is important and has implications for future research. This study provides an important source of baseline data. This study has

simple concepts and measurements for other researchers to elaborate on in greater, more specific detail. Race not proving to be significant is a major find of this study. This is a forthright contrast to practically every study in the field to date. This should be further analyzed in the future. It is possible that university students are in positions of greater prosperity than those not attending, therefore resulting in even minority groups having not experienced such discrimination (Garland & Bumphus, 2012).

Education, notwithstanding, is a factor associated with higher levels of positive perception of the police (Afon & Badiora, 2016). An overall positive perception of BWCs is key as well, adding to the prior research that the majority of citizens are in favor of them as well. Its strong association with major in this study is no surprise. Perceiving inequality showing statistically significant association with positive BWC perception is pertinent to this study as well as future research. Individuals realizing inequality's existence in the system, and subsequently calling for greater transparency and accountability as a result, presents evidence for the support of major legislation at the local, state, and federal levels. If research yielding similar results can be replicated in the future, it may have major policy implications for police BWCs. This ties in to major having an association as well. While not all criminal justice majors will go into careers of research, policy, or law enforcement, it is logical to deduce that some will. It is of paramount importance to discover student perceptions of BWCs for this reason, students today and their perceptions may have major influence in future social movements and legislation.

The findings of this study by itself do not have major police implications due to its limitations and lack of generalizability. In supplement to the existing literature, however, it certainly provides a groundwork for legislation to consider. There has been growing support for BWCs over the years, including massive amounts of funding be allotted to it from governmental

and police agencies (Wasserman, 2017). Respondents of other studies have resembled those in the current study, sharing the opinion that BWCs could benefit both the public and the police in citizen-police interactions (Jennings et al., 2015). While college students themselves are not at a high risk of interaction with the police due to their educational pursuit, the demographic with which they relate to is (Yull, 2015). The likelihood of committing crime rises in early adolescence and peaks in late adolescence (Piquero et al., 2015). To date, there is no literature on perceptions of BWCs for this demographic, making this study the only source of reference. The findings of study point toward the favor of BWC implementation for this demographic. It unveils the need for further research to establish perceptions of BWCs and provide a firm direction for policy to take.

REFERENCES

- Afon, A. O., & Badiora, A. I. (2016). Accounting for variation in perception of police. *Police Journal*, 89(3), 241-256. doi:10.1177/0032258X16658926
- Ariel, B., Farrar, W., & Sutherland, A. (2015). The effect of police body-worn cameras on use of force and citizens' complaints against the police: A randomized controlled trial. *Journal of Quantitative Criminology*, 31(3), 509-535. doi:10.1007/s10940-014-9236-3
- Avdija, A. S. (2010). The role of police behavior in predicting citizens' attitudes toward the police. *Applied Psychology in Criminal Justice*, 6(2), 76-90.
- Boateng, F. D. (2016). Students and the police in Ghana: Mixed feelings. *Police Practice & Research*, *17*(6), 555-569. doi:10.1080/15614263.2015.1086877
- Boda, Z., & Medve-Bálint, G. (2017). How perceptions and personal contact matter: The individual-level determinants of trust in police in Hungary. *Policing & Society*, 27(7), 732-749. doi:10.1080/10439463.2015.1053479
- Booren, L. M., & Handy, D. J. (2009). Students' perceptions of the importance of school safety strategies: An introduction to the IPSS survey. *Journal of School Violence*, 8(3), 233-250. doi:10.1080/15388220902910672
- Brown, B., & Reed Benedict, W. (2002). Perceptions of the police. *Policing: An International Journal of Police Strategies & Management*, 25(3), 543-580. doi:10.1108/13639510210437032
- Brucato, B. (2015). Policing made visible: Mobile technologies and the importance of point of view. *Surveillance & Society*, 13(3/4), 455-473.
- Carter, J. S., & Corra, M. (2016). Racial resentment and attitudes toward the use of force by police: An over-time trend analysis. *Sociological Inquiry*, 86(4), 492-511. doi:10.1111/soin.12136
- Chanin, J., & Espinosa, S. (2016). Examining the determinants of police department transparency. *Criminal Justice Policy Review*, 27(5), 498-519. doi:10.1177/0887403415596039

- Chow, H. P. H. (2011). Adolescent attitudes toward the police in a western Canadian city. *Policing: An International Journal of Police Strategies & Management*, *34*(4), 638-653. doi:10.1108/13639511111180252
- Coon, J. K. (2016). Police officers' attitudes toward diversity issues. *International Journal of Police Science & Management*, 18(2), 115-125. doi:10.1177/1461355716643091
- Coudert, F., Butin, D., & Le Métayer, D. (2015). Body-worn cameras for police accountability: Opportunities and risks. *Computer Law & Security Review*, 31(6), 749-762. doi:10.1016/j.clsr.2015.09.002
- Crow, M. S., Crichlow, V. J., Snyder, J. A., & Smykla, J. O. (2017). Community perceptions of police body-worn cameras. *Criminal Justice & Behavior*, 44(4), 589-610. doi:10.1177/0093854816688037
- Culhane, S. E., Boman, J. H., & Schweitzer, K. (2016). Public perceptions of the justifiability of police shootings: The role of body cameras in a pre- and post-Ferguson experiment. *Police Quarterly*, 19(3), 251-274. doi:10.1177/1098611116651403
- Davies, T. L., Lavin, A. M., & Korte, L. (2009). Student perceptions of how technology impacts the quality of instruction and learning. *Journal of Instructional Pedadogies*, 2, 2-16.
- Dawes, D., Heegaard, W., Brave, M., Paetow, G., Weston, B., & Ho, J. (2015). Body-worn cameras improve law enforcement officer report writing accuracy. *Journal of Law Enforcement*, 4(6), 1-21.
- De Angelis, J., & Wolf, B. (2016). Perceived accountability and public attitudes toward local police. *Criminal Justice Studies*, 29(3), 232-252. doi:10.1080/1478601X.2016.1158177
- Drover, P., & Ariel, B. (2015). Leading an experiment in police body-worn video cameras. *International Criminal Justice Review (Sage Publications)*, 25(1), 80-97. doi:10.1177/1057567715574374
- Engen, R. L., Steen, S., & Bridges, G. S. (2002). Racial disparities in the punishment of youth: A theoretical and empirical assessment of the literature. *Social Problems*, 49(2), 194.
- Fagan, J., & Tyler, T. R. (2005). Legal socialization of children and adolescents. *Social Justice Research*, *18*(3), 217-242. doi:10.1007/s11211-005-6823-3
- Feinstein, R. (2015). A qualitative analysis of police interactions and disproportionate minority contact. *Journal of Ethnicity in Criminal Justice*, 13(2), 159-178. doi:10.1080/15377938.2014.936645
- Fine, A., Cavanagh, C., Donley, S., Steinberg, L., Frick, P. J., & Cauffman, E. (2016). The role of peer arrests on the development of youths' attitudes towards the justice system. *Law & Human Behavior*, 40(2), 211-218. doi:10.1037/lhb0000167

- Flexon, J. L., Greenleaf, R. G., Dariano, D. S., & Gibson, D. (2016). An examination of police stops and youths' attitudes toward police: Do interracial encounters matter? *Journal of Ethnicity in Criminal Justice*, 14(1), 21-39. doi:10.1080/15377938.2014.997953
- Garland, T. S., & Bumphus, V. W. (2012). Race, bias, and attitudes toward drug control policy. *Journal of Ethnicity in Criminal Justice*, 10(2), 148-161. doi:10.1080/15377938.2012.669654
- Garland, T. S., Bumphus, V. W., & Knox, S. A. (2012). Exploring general and specific attitudes toward drug policies among college students. *Criminal Justice Policy Review*, 23(1), 3-17. doi:10.1177/0887403410389807
- Girgenti-Malone, A. A., Khoder, C., Vega, G., & Castillo, D. (2017). College students' perceptions of police use of force: do suspect race and ethnicity matter? *Police Practice & Research*, 18(5), 492-506. doi:10.1080/15614263.2017.1295244
- Gray, M. K., & Brown, K. L. (2009). Drinking and drug use by college students: Comparing criminal justice majors and non-majors. *Journal of Criminal Justice*, *37*(3), 234-240. doi:10.1016/j.jcrimjus.2009.04.003
- Greene, H. T., & Gabbidon, S. L. (2009). Encyclopedia of race and crime. *Encyclopedia of Race and Crime* (1st ed., Vol. 1). Thousand Oaks, CA: Sage Publications.
- Greenfieldboyce, N. (2017, October 20). Body cam study shows no effect on police use of force or citizen complaints. Retrieved from https://www.npr.org/sections/thetwo-way/2017/10/20/558832090/body-cam-study-shows-no-effect-on-police-use-of-force-or-citizen-complaints
- Hendrickson, K., & Olson, K. (2015). Introduction, NACOLE/CJPR special issue: Moving beyond discipline—The role of civilians in police accountability. *Criminal Justice Policy Review*, *27*(5), 447-454. doi:10.1177/0887403415594844
- Jacobsen, S. K. (2015). Policing the ivory tower: Students' perceptions of the legitimacy of campus police officers. *Deviant Behavior*, *36*(4), 310-329. doi:10.1080/01639625.2014.935653
- Jennings, W. G., Fridell, L. A., & Lynch, M. D. (2014). Cops and cameras: Officer perceptions of the use of body-worn cameras in law enforcement. *Journal of Criminal Justice*, 42(6), 549-556. doi:10.1016/j.jcrimjus.2014.09.008
- Jennings, W. G., Lynch, M. D., & Fridell, L. A. (2015). Evaluating the impact of police officer body-worn cameras (BWCs) on response-to-resistance and serious external complaints: Evidence from the Orlando police department (OPD) experience utilizing a randomized controlled experiment. *Journal of Criminal Justice*, 43(6), 480-486. doi:10.1016/j.jcrimjus.2015.10.003

- Koski, D. D. (1996). The relative impact of educational attainment and fatherlessness on criminality. *Journal of Correctional Education*, 47(4), 182-189.
- Koster, N.-S. N., Kuijpers, K. F., Kunst, M. J. J., & Van der Leun, J. P. (2016). Crime victims' perceptions of police behavior, legitimacy, and cooperation: A review of the literature. *Victims & Offenders*, 11(3), 392-435. doi:10.1080/15564886.2015.1065532
- Lai, Y.-L., & Zhao, J. S. (2010). The impact of race/ethnicity, neighborhood context, and police/citizen interaction on residents' attitudes toward the police. *Journal of Criminal Justice*, 38(4), 685-692. doi:10.1016/j.jcrimjus.2010.04.042
- Mackey, D. A., & Smith, M. W. (2012). X-ray scanning, wiretaps, and other searches: examining college students' perceptions of the reasonableness and intrusiveness of homeland security searches. *Criminal Justice Studies*, 25(4), 371-389. doi:10.1080/1478601X.2012.728785
- McNeeley, S., & Grothoff, G. (2016). A multilevel examination of the relationship between racial tension and attitudes toward the police. *American Journal of Criminal Justice*, 41(3), 383-401. doi:10.1007/s12103-015-9318-2
- Nivette, A. E., Eisner, M., Malti, T., & Ribeaud, D. (2015). The social and developmental antecedents of legal cynicism. *Journal of Research in Crime & Delinquency*, 52(2), 270-298. doi:10.1177/0022427814557038
- Nix, J., & Pickett, J. T. (2017). Third-person perceptions, hostile media effects, and policing: Developing a theoretical framework for assessing the Ferguson effect. *Journal of Criminal Justice*, *51*, 24-33. doi:10.1016/j.jcrimjus.2017.05.016
- Patterson, G. T., & Swan, P. G. (2016). Police shootings of unarmed African American males: A systematic review. *Journal of Human Behavior in the Social Environment*, 26(3/4), 267-278. doi:10.1080/10911359.2015.1125204
- Peck, J. H. (2015). Minority perceptions of the police: A state-of-the-art review. *Policing: An International Journal*, 38(1), 173-203. doi:10.1108/PIJPSM-01-2015-0001
- Piquero, A. R., Jennings, W. G., Diamond, B., & Reingle, J. M. (2015). A systematic review of age, sex, ethnicity, and race as predictors of violent recidivism. *International Journal of Offender Therapy and Comparative Criminology*, 59(1), 5-26. doi:10.1177/0306624X13514733
- Rabe-Hemp, C. E., Gokhale, A., & Woeste, L. (2013). Perceptions of science and technology: A comparison of criminal justice and traditional science and technology majors. *Journal of Criminal Justice Education*, 24(2), 137-152. doi:10.1080/10511253.2012.669771

- Ready, J., & Young, J. (2015). The impact of on-officer video cameras on police-citizen contacts: Findings from a controlled experiment in Mesa, AZ. *Journal of Experimental Criminology*, 11(3), 445-458. doi:10.1007/s11292-015-9237-8
- Sethuraju, R., Sole, J., Oliver, B. E., & Prew, P. (2017). Perceptions of police misconduct among university students. *Race and Justice*. doi:10.1177/2153368716689709
- Shane, J. M., Lawton, B., & Swenson, Z. (2017). The prevalence of fatal police shootings by U.S. police, 2015–2016: Patterns and answers from a new data set. *Journal of Criminal Justice*, 52, 101-111. doi:10.1016/j.jcrimjus.2017.05.001
- Shelley, T. O. C., Waid, C. A., & Dobbs, R. R. (2011). The influence of criminal justice major on punitive attitudes. *Journal of Criminal Justice Education*, 22(4), 526-545. doi:10.1080/10511253.2011.556132
- Simpson, R. (2017). The police officer perception project (POPP): An experimental evaluation of factors that impact perceptions of the police. *Journal of Experimental Criminology*, 13(3), 393-415. doi:10.1007/s11292-017-9292-4
- Smith, B. W., & Holmes, M. D. (2003). Community accountability, minority threat, and police brutality: An examination of civil rights criminal complaints. *Criminology*, 41(4), 1035-1063.
- Sousa, W. H., Coldren, J. R., Rodriguez, D., & Braga, A. A. (2016). Research on body worn cameras. *Police Quarterly*, *19*(3), 363-384. doi:10.1177/1098611116658595
- Stack, L., & Hauser, C. (2017, May 2). Police account changes in killing of Texas 15-year-old. *New York Times*, p. A12. Retrieved from https://www.nytimes.com/2017/05/01/us/dallas-police-teen-shooting.html
- Tomaskovic-Devey, D., Mason, M., & Zingraff, M. (2004). Looking for the driving while black phenomena: Conceptualizing racial bias processes and their associated distributions. *Police Quarterly*, 7(1), 3-29. doi:10.1177/1098611103259858
- U.S. Department of Justice, Bureau of Justice Assistance. (2015). *Body-worn camera toolkit:* Frequently asked questions. Retrieved from https://www.bja.gov/bwc/pdfs/bwc_faqs.pdf.
- Wasserman, H. M. (2017). Recording of and by police: The good, the bad, and the ugly. *Journal of Gender, Race & Justice*, 20(3), 543-562.
- White, M. D. (2014). *Police officer body-worn cameras: Assessing the evidence*. Washington DC: Office of Community Oriented Policing Services.
- Williams, L. S., & Nofziger, S. (2003). Cops and the college crowd: Young adults and perceptions of police in a college town. *Journal of Crime & Justice*, 26(2), 125-151.

- Wilson, W. J., & Taub, R. P. (2007). There goes the neighborhood: Racial, ethnic, and class tensions in four Chicago neighborhoods and their meaning for America. New York, NY: Vintage.
- Wright, V., & Unah, I. (2017). Media exposure and racialized perceptions of inequities in criminal justice. *Social Sciences*, 6(4). doi:10.3390/socsci6030067
- Wu, Y., & Sun, I. Y. (2010). Perceptions of police: An empirical study of Chinese college students. *Policing: An International Journal of Police Strategies & Management, 33*(1), 93-113. doi:10.1108/13639511011020610
- Young, J. T. N., & Ready, J. T. (2015). Diffusion of ideas and technology: The role of networks in influencing the endorsement and use of on-officer video cameras. *Journal of Contemporary Criminal Justice*, 31(3), 243-261. doi:10.1177/1043986214553380
- Yull, A. (2015). The impact of race and socioeconomic status on access to accommodations in post-secondary education. *American University Journal of Gender, Social Policy & the Law*, 23(2), 353-392.

APPENDIX

A. IRB Approval Letter



Institutional Review Board

Dept. 4915 615 McCallie Avenue Chattanooga, TN 37403-2598 Phone: (423) 425-5867 Fax: (423) 425-4052

instrb@utc.edu http://www.utc.edu/irb

MEMORANDUM

TO: Dr. Tammy Garland

Alyssa Green, Bryant Plumlee

IRB # 17-119

FROM: Lindsay Pardue, Director of Research Integrity

Dr. Amy Doolittle, IRB Committee Chair

DATE: 8/28/2017

SUBJECT: IRB #17-119: Student Perceptions on the Use of Body-Worn Cameras in Policing and

Community Relations

The IRB Committee Chair has reviewed and approved your application and assigned you the IRB number listed above. You must include the following approval statement on research materials seen by participants and used in research reports:

The Institutional Review Board of the University of Tennessee at Chattanooga (FWA00004149) has approved this research project #17-119.

Annual Renewal. All approved research is subject to UTC IRB review, at least once a year. Please visit our website (http://www.utc.edu/research-integrity/institutional-review-board/forms.php) for the Form B (continuation / change / completion form) that you will need to complete and submit if your project remains active and UTC IRB approval needs to be renewed for another year. Unless your research moves in a new direction or participants have experienced adverse reactions, then renewal is not a major hurdle. You as Principal Investigator are responsible for turning in the Form B on time (2 weeks before one year from now), and for determining whether any changes will affect the current status of the project. When you complete your research, the same change/completion form should be completed indicating project termination. This will allow UTC's Office of Research Integrity to close your project file.

Please remember to contact the IRB immediately and submit a new project proposal for review if significant changes occur in your research design or in any instruments used in conducting the study. You should also contact the IRB immediately if you encounter any adverse effects during your project that pose a risk to your subjects.

For any additional information, please consult our web page $\frac{\text{http://www.utc.edu/irb}}{\text{or email}}$ or email $\frac{\text{instrb@utc.edu.}}{\text{or email}}$

Best wishes for a successful research project.

VITA

Bryant T. Plumlee was born in Union, KY, the first-born child of Tal and Sonja Plumlee. Following the first five years of life in KY, he moved to Cross Plains, TN. From the age of six, he worked in the dairy barn milking cattle every summer morning, followed by the tobacco patches and hay fields each afternoon. Bryant graduated high school from Davidson Academy in 2011. He enrolled at the University of Tennessee and played football there for two years, three times being nominated to the First Team All-SEC Academic team. He then transferred to the University of Tennessee at Martin for a semester to play football, and following an injury moved home for a semester to finish his general education classes at Volunteer State Community College. In the spring of 2014, he enrolled in the criminal justice program at the University of Tennessee at Chattanooga. He graduated from the University of Tennessee at Chattanooga in the spring of 2015 with hopes of law school. After deciding law school was not his chosen path, he worked in construction for a year and then enrolled in the criminal justice graduate program following Dr. Tammy Garland's constant pestering to do so. He was awarded the Doc Shettler scholarship award and a graduate assistantship. It was here he realized his true passion in research. Bryant graduates with his M.S. in Criminal Justice in the spring of 2018. He is continuing his education at the University of Louisville on a full ride with an assistantship for the Criminal Justice Doctoral program. He hopes to one day be a tenured professor at a university and publish research on the pressing issues in the American criminal justice system.