Douglas County Pedestrian and Traffic Stop Study, 2020-2021

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Executive Summary

Racial profiling involves an individual officer making a decision to stop an individual and, for example, issue a citation versus a warning and/or search an individual based on the individual's race, ethnicity, or other characteristic rather than the behavior of that individual. Although social science research can assist in identifying patterns of racial profiling disparities in pedestrian and/or traffic stops, it is difficult to identify patterns of racial profiling discrimination. Specifically, it is difficult to determine whether an individual officer's decision-making is the result of that individual officer's bias or the result of factors other than bias. Numerous studies indicate that persons of color are being stopped and searched more often than non-persons of color.[1] This may be the result of racial profiling by officers or a legitimate response to crime occurring in a neighborhood. For example, a local neighborhood group might complain that a certain group of individuals might be selling drugs in that neighborhood and that group might be of a certain race or ethnicity. In that case, the disparity in searches might be the result of law enforcement reacting to community calls about crime problems.

In order to determine if disparities are the result of discrimination, local law enforcement agencies must engage in a more in-depth investigation into the everyday actions of police officers by following a multi-step process:

1. First, law enforcement agencies must agree to collect data on all stops conducted by their officers. In the current study, all Douglas County law enforcement agencies agreed to develop a data collection system to begin collecting data on all stops.
2. Second, the data on stops needs to be analyzed to determine if any disparities exist and if so, in what specific areas and actions do these disparities exist. To determine if these disparities are the result of discrimination, each law enforcement agency must look further into each case to identify and determine whether there is a legitimate law enforcement explanation and identify those disparities without a legitimate law enforcement explanation. This analysis should be done at the individual officer-level to determine if the actions of individual officers are causing any patterns of disparities.
3. Finally, the law enforcement agency should report this information back to their community. Specifically, stops under investigation as to whether or not the disparities are found to be legitimate as well as cases under further investigation and/or review and cases under determination of the final outcome.

[1] Engel & Johnson, 2006

Law enforcement agencies should continue to practice this multi-step process annually to identify and address any disparities while continuing to monitor these actions as remain transparent given the impact that racial profiling has on persons and communities of color.

Methodology & Findings

Using traffic stop data collected during a 24-month study period (January 1, 2020 to December 31, 2021) from local law enforcement agencies in Douglas County, Kansas, the findings (see Section V) below are based on the application of multiple analytical methods to determine whether there is any evidence of racial disparities in traffic stops:

- *Adjusted Driving Population*. Using data on traffic stops of Douglas County residents, this analysis found that Black residents were 2.73 times more likely to be stopped in comparison to the adjusted population estimate. Law enforcement agencies should consider collecting information on the residency of the drivers to identify whether these disparities vary across one or more jurisdictions.
- *Multivariate Analyses*. Using a multivariate analytical approach to identify whether the driver's race/ethnicity was a significant predictor in Douglas County traffic stops while controlling for other variables associated to traffic stop decision-making, the results indicate that drivers of color were 1.72 times more likely to be searched than white drivers. The results for drivers of color predicting citations or arrests were not found to be statistically significant.
- *Veil of Darkness Test*. Using the veil of darkness test, the findings reveal that drivers of color in Douglas County are stopped less frequently during the daylight than during darkness, which does not show any evidence of racial profiling because persons of color are not disproportionately stopped during daylight when visibility is higher theoretically.
- *Post Stop Analyses*. Based on a further examination into post-stop decision-making at the agency-level in Douglas County, the findings indicate that some agencies were more likely to issue a citation (versus a warning) and search (versus not search) drivers of color in comparison to non-drivers of color:
    - Looking at drivers who were stopped, two of the five agencies were more likely to issue a citation following a traffic stop to drivers of color.
    - Looking at the basis for the traffic stop, three of the five agencies were more likely to issue a citation for speeding 10 mph over the speed limit and two of the five agencies were more likely to issue a citation for equipment/inspection violations to drivers of color.
    - Looking at traffic stops resulting in a discretionary search, four of the five agencies were more likely to search drivers of color. However, due to the limited number of discretionary searches conducted by some agencies, only two of the five agencies were examined for disparities on "hit rates." In other words,

searches or frisks that result in one or more types of contraband found. One of the agencies was more likely to find no contraband on drivers of color than non-drivers of color after conducting a discretionary search.

Recommendations

Based on findings from the current study examining traffic stop data in Douglas County from January 1, 2021 to December 31, 2022, below are four key recommendations (see Section VII) to help reduce existing racial disparities in Douglas County:

- *Recommendation #1*: Douglas County law enforcement agencies should continue to collect data on all stops to identify any disparities. Additionally, Douglas County law enforcement agencies, in conjunction with the Douglas County CJCC, should review the data elements currently being collected to determine if any data elements should be added or revised.
- *Recommendation #2*: Douglas County law enforcement agencies should continue to examine and discuss findings from the stop data analyses bi-annually or annually with the help and support of the Douglas County CJCC. Additionally, Douglas County law enforcement agencies should investigate areas where disparities are identified by examining other stop-level characteristics (e.g., location), officer-level characteristics (e.g., years of service), and collecting additional information from police reports and body worn camera footage on the stop.
- *Recommendation #3*: Douglas County law enforcement agencies should review the basis for the stops to ensure that officers are following the agency's policies and any future changes to policing policies. Additionally, Douglas County law enforcement agencies should consider exploring programs that may help to improve police-community relations.
- *Recommendation #4*: Douglas County law enforcement agencies, with help and support of the Douglas County CJCC, should publish findings from the stop data collection and analyses in an online data dashboard and a comprehensive report. Law enforcement agencies should set up a process to examine and discuss the data and ongoing analysis with the community bi-annually or annually to maintain and open dialogue with residents of each community.

I. Introduction

Data collection by law enforcement agencies on policing activity can be an effective and important tool that local agencies can use to inform policies and practices. According to the Presidential Task Force on 21st Century Policing,[2] transparent data collection is a major steppingstone to building trust and legitimacy between police and their communities. Transparent data collection can help departments in developing effective policies, serving as a means for oversight, assisting with the application of technology and social media tools, improving community policing and other crime reduction efforts, assisting with training and education, and improving officer wellness and safety.

Despite the widespread calls for data driven decision making by law enforcement agencies, many do not analyze their traffic and pedestrian stop data even though this is the most frequent point of interaction between police and community members, with one out of every ten U.S. residents ages 16 years or older encountering a police officer during a traffic stop.[3] One of the main reasons why agencies do not analyze their traffic enforcement data to determine if racial or ethnic disparities exist is simply that they do not collect all the data necessary to answer this question. While many law enforcement agencies collect information on drivers who were stopped and received a written citation or warning for a traffic violation, few agencies collect information on stops that that resulted in other outcomes such as a verbal warning. To conduct a comprehensive examination of stop data that identifies patterns of racial and ethnic disparities in traffic enforcement, an agency needs to collect data on all traffic stops regardless of the outcome of the stop. However, many law enforcement agencies argue that this data collection is burdensome to their officers and have chosen not to collect it. On the contrary, law enforcement agencies in Douglas County, Kansas understood the need to have a complete data set to identify whether disparities exist and agreed to implement a process to begin collecting data on all traffic stops.

[2] On December 18, 2014, former President Barack Obama issued an order appointing a task force on 21st century policing to identify best practices and make recommendations on how policing practices can reduce crime while maintaining positive relationships with the community. The final report by the task force can be found here: https://cops.usdoj.gov/pdf/taskforce/taskforce_finalreport.pdf

[3] Harrell & Davis (2020)

Development of Project

Following the killings of Michael Brown in Ferguson, Missouri and Freddie Gray in Baltimore, Maryland, concerns arose across the country about police misconduct and whether police were engaging in racially biased behavior. As indicated earlier, most communities, such as those in Douglas County, had insufficient information on pedestrian and traffic stops to address these questions. The Douglas County Criminal Justice Coordinating Council (CJCC) set out to locate a group of researchers who could help local law enforcement agencies collect and examine data that would answer the questions of whether racial disparities exist in pedestrian and traffic stops, and if so, whether they are a result of racial profiling.

Based on recommendations from experts in this area of research, Robert Bieniecki, the former Coordinator of the CJCC, met with Dr. Jack McDevitt from Northeastern University's Institute on Race and Justice and Dr. Janice Iwama from American University in 2017. Previously, Drs. McDevitt and Iwama had conducted similar analyses in Rhode Island, Vermont, and Washington State. They met with members of the CJCC, the Sheriff, and police chiefs, who would be involved in the study, to address any questions on the purpose of the study, community concerns, and required data needed to accomplish the study's goals.[4] After these meetings, a contract to collaborate with Douglas County law enforcement agencies to conduct a study on pedestrian and traffic stops was developed and the work began in 2019.

The initial task required to collect adequate data involved designing a new data collection protocol. The research team met with the leaders of each law enforcement agency and members of the CJCC to design a data collection tool that would collect sufficient information to conduct a reliable analysis on pedestrian and traffic enforcement practices in Douglas County. This process involved trying to find a balance between collecting sufficient data to conduct a reliable analysis and not overburdening the officers who would be collecting the information (see Appendix A for the stop data collection form). Once the required data collection information was agreed upon, the next step was to determine how each agency would collect this information.

[4] It is interesting to note that only one of the five law enforcement agency leaders, who attended the initial planning meetings, remains in a leadership role since 2019.

Due to the range in the sizes of each of the law enforcement agencies in Douglas County, each agency has different technological capabilities and resources. Although each agency agreed to collect the same data elements, the data collection tool would vary based on their existing data collection capabilities. The Douglas County Sheriff's Office (DCSO) agreed to design a data collection template that could be used by the deputies in their patrol cars. Following a discussion with the small agencies (Baldwin and Eudora Police Departments), DCSO agreed to collect and store their data along with the DCSO data. The Lawrence Police Department developed a separate system for their officers to input information from their patrol cars based on their existing technological capabilities. Finally, the University of Kansas Police Department (KUPD) agreed to have officers complete paper forms and have their administrative staff input the data as they were doing with other data being collected by their officers. While the data collection systems varied across agencies, each agency collected the same data elements to compare pedestrian and traffic stop patterns across all agencies.

After the stop data collection form was finalized and the data collection systems were developed, the law enforcement agencies agreed to train their officers on how to record the information on each pedestrian and traffic stop. Members of the research team met with each agency to provide training either to the department's supervising officers or, in the case of the smaller law enforcement agencies, to their full-time and part-time officers. During these trainings, police officers raised questions on the stop data collection form and analyses including how the driver's/subject's race/ethnicity would be determined. Like numerous other studies examining racial disparities in traffic stops, officers were asked to record the race/ethnicity of the driver/pedestrian based on their perception at the time the stop was conducted.

Following the training sessions, it was agreed that each agency would collect data from September 1, 2019 to December 31, 2019 to pilot the study. This data was audited by the research team to determine whether there were any inconsistencies, missing information, and/or other problems in the stop data being collected. The initial audit revealed that officers were recording all information in the stop data collection form with few problems. Although the initial project was originally scheduled to examine pedestrian and traffic stop data from January 1, 2020 through December 31, 2020, the CJCC and law enforcement agencies agreed to extend the study through

the end of 2021 due to a dramatic decline in pedestrian and traffic stop activity during the COVID-19 pandemic following the passage of stay-at-home restrictions.

Organization of Report

This report is organized into five main sections. First, we provide a review of the literature on racial profiling along with recent developments concerning traffic enforcement across the country in Section II. The following section discusses the characteristics of each jurisdiction in Douglas County, Kansas including changes in the demographic makeup of these areas over the past decade. Section IV describes the characteristics of the traffic and pedestrian stops in Douglas County over the study period from January 1, 2020 to December 31, 2021 and compares these data to national-level stop data as reported by the U.S. Department of Justice. Section V provides an overview on different methodological approaches used to identify whether there is any evidence of racial and ethnic disparities in the decision to stop a vehicle, the decision to issue a citation to a driver, the decision to arrest the driver, and the decision to search the driver. Additionally, we report on the findings using each of these methodological approaches and discuss the implications from these findings. The final section summarizes these findings and discusses the activities agencies have started to engage in since the beginning of the study to reduce these disparities. We conclude with six key recommendations on how agencies can reduce racial disparities and improve police-community relations. This report is intended to encourage and guide police and communities in Douglas County as they begin to take action to reduce racial disparities, monitor police stop activity, and continue to engage in a discussion on improving police-community relations.

II. Literature Review

Twenty-five years have passed since the first legislation, the Traffic Stops Statistic Act of 1997, was passed unanimously by the U.S. House of Representatives to combat racial profiling in traffic stops.[5] Since that time, policymakers and practitioners have sought to understand the terms associated with the concept of racial profiling. For example, the Kansas Attorney General's Office passed a policy to protect members of the community from *racial or bias-based policing*, which refers to "the unreasonable use of race, ethnicity, national origin, gender, or religion by law enforcement officer in deciding to initiate an enforcement action."[6] Previous studies have shown that police interactions can have a significant impact on police legitimacy and therefore, it is important to protect citizens from racial profiling in order to raise the level of trust community members have in their local policing agency. Although state and local governments have recently passed legislation banning certain types of stops and requiring the collection of data on stops made by police officers, it is important that policymakers and practitioners continue to prevent any acts of racial or bias-based policing to reduce further injury to their community.

Racial Profiling and Police Legitimacy

Racial profiling by police is a delegitimizing practice. Public evaluations of policing have revealed several aspects about the importance of legitimacy. First, legitimacy can be viewed as the belief that criminal justice institutions ought to be allowed to exercise their authority to maintain social order, manage conflicts and solve problems in their communities.[7] Second, when testing for legitimacy, researchers have operationalized it in a multitude of ways, ranging from general beliefs in the effectiveness of police in stopping and solving crime, to the individual actions of officers. This presents a situation where police performance and police treatment are at odds. Prevailing research has shown, however, that variations in public evaluations of legitimacy are explained by police treatments rather than police performance, positing that the antecedent to police legitimacy is procedural fairness.[8] Third, decreases in police legitimacy due to procedurally unjust behavior

[5] Harris, 2020
[6] Kansas Attorney General, 2017, p. 1
[7] Tyler & Jackson, 2013
[8] Murphy et al., 2008; Sunshine & Tyler, 2003; Tyler & Huo, 2002; Tyler & Jackson, 2013

can result in less public cooperation with law enforcement, less compliance with criminal statutes, and less support for policing policies and legislation. While each of these facets are important on their own, the aggregate effect of legitimacy can either hinder the goals of law enforcement.

More recently, research has uncovered the fact that racial profiling can have negative impacts on those who believed they were profiled.[9] Among a sample of community members and college students, those who believed that they were unfairly stopped reported emotional, cognitive, and behavioral reactions during and in the aftermath of encounters. These reactions ranged from feeling unbothered to feeling fearful and offended. Cognitive reactions ranged from cognitive coping of the incident to altered perceptions about the police and themselves. Lastly, behavioral reactions ranged from help-seeking behavior to changing their appearance to avoid procedurally unjust police contact.

Other research has documented the impacts of procedurally unjust behavior on police legitimacy. In a two-wave survey of New Yorkers by Mazerolle and colleagues (2013), respondents who reported having a procedurally just encounter with police had higher ratings of police legitimacy compared to those who did not have any encounter with police, regardless of the outcome of the stop. The inverse finding is also true: respondents who reported having a procedurally unjust encounter with police had significantly lower ratings of police legitimacy than those who did not have any encounter. Therefore, procedurally just encounters resulted in respondents having a "greater obligation to obey; had more trust and confidence in the police; and identified more strongly with the police."[10] Policing agencies have much to gain by engaging in procedurally just practices even in short encounters such as traffic stops.

Racial Profiling and Traffic Enforcement Legislation

More recently, several state and local governments have introduced legislation that aims to reduce or ban police from conducting a stop involving a pretextual and/or low-level offense due to the racially skewed effect it has illustrated for persons of color. For example, the city of Philadelphia became the first major U.S. city to pass such legislation after findings from a study by the Philadelphian Defender Association found significant racial disparities in pretextual stops

[9] Nadal et al., 2017
[10] Mazerolle et al., 2013, p. 260

conducted in 2018 and 2019.[11] Under the Driving Equality Law, the Philadelphia Police Department is no longer able to stop individuals solely for a minor traffic violation, such as expired registration, unless it is accompanied by another type of violation, such as speeding. Another bill also requires Philadelphia Police Department to publish their traffic stop data collection.[12]

Similarly, policymakers in Massachusetts, Maryland, Oregon, and Virginia are considering the introduction of legislation or development of new practices that would ban or reduce police officers from conducting pretextual stops to directly target issues involving racial profiling. For example, Cambridge, Massachusetts lawmakers are considering the removal of traffic stops from police control while Montgomery County, Maryland officials are considering the installation of traffic stop to reduce police-citizen interactions at traffic stops. The Oregon Supreme Court ruled that police officers could no longer request for consent to search a car following a stop for a minor traffic violation. Oregon and Virginia lawmakers are considering legislation that would limit or ban pretextual traffic stops.[13]

Although traffic stop activity during the COVID-19 pandemic declined across the country, traffic stop data indicates that racial disparities persisted in many communities and increased in others. For instance, the Missouri Attorney General's Office reported that Black drivers were more likely to be stopped than White drivers during the pandemic raising concerns about the large portions of persons of color that were out on the roads providing essential services.[14] Despite pre-pandemic concerns raised by community members about racial disparities in traffic stops, the death of Daunte Wright, who was shot by a Minneapolis police officer after stopping him for an expired registration tag and confusing her gun for a taser, in April of 2021 represented a significant turning point for Minneapolis officials who decided that police would no longer stop individuals for minor traffic violations, such as expired tags. The city attorney also declared that individuals who received a ticket for driving on expired licenses would no longer be pursued given the disproportionate impact on persons of color. [15]

[11] Conde, 2021
[12] Defender Association of Philadelphia, 2022
[13] Mercer, 2020
[14] Salter, 2021
[15] Bellware, 2021

Summary

Racial profiling in traffic stops inherently contradicts the goals of law enforcement – to enforce the law in a fair and impartial way based on a person's conduct and not their racial and/or ethnic identity. It is an ineffective policing strategy, unsuccessful in crime prevention, and undermines legitimacy in law enforcement while creating and extending tension and mistrust between police and communities.[16] In response to reports and studies indicating that persons of color are frequently stopped, cited, and searched, federal, state, and local policymakers have recently taken steps to reduce or ban stops resulting from minor traffic violations. Nevertheless, patterns of disparate treatment continue to proliferate in many communities calling for additional and/or innovative approaches to reduce racial disparities in policing activity.

[16] Welsh et al., (2021)

III. Setting: Douglas County

With 121,304 residents, Douglas County is the fifth largest county in Kansas and accounts for 4.2 percent of the total population in the state of Kansas. It is comprised of four municipalities – Baldwin (4,684), Eudora (6,551), Lawrence (97,348), and Lecompton (857) – with Lawrence representing the largest city in the county making up over 80 percent of the county's population. Below is a brief description of the population in Douglas County and each municipality.

Douglas County

Like many other counties in the state of Kansas, residents in Douglas County are predominately non-Hispanic White. However, other racial/ethnic populations have recently experienced larger growths since 2010 (see Table 3.1). According to the U.S. Census data, the overall population in Douglas County increased by about 11 percent between 2010 to 2020. The largest increase was among residents who identify as some other race, which increased by 212.4 percent. Residents who identify as belonging to two or more races increased by about 74 percent while Asian and Hispanic residents increased by about 50 percent. The non-Hispanic Black population increased by about 24 percent and the non-Hispanic White population increased by about 5 percent between 2010 and 2020. On the other hand, the non-Hispanic American Indian/Alaska Native and Native Hawaiian/Other Pacific Island populations decreased by about 17 and 84 percent, respectively.

Table 3.1. Percent Change in Douglas County Population by Race/Ethnicity

	2010	2020	% Change between 2010 and 2020
Total population	**109,052**	**121,304**	**+11.2%**
White*	89,625	94,090	+5.0%
Black or African American*	3,879	4,812	+24.1%
American Indian and Alaska Native*	2,608	2,178	-16.5%
Asian*	4,194	6,343	+51.2%
Native Hawaiian and Other Pacific Islander*	83	13	-84.3%
Some other race*	241	753	+212.4%
Two or more races*	3,078	5,353	+73.9%
Hispanic or Latino (of any race)	5,344	7,762	+45.2%

*Excludes persons of Hispanic origin (e.g., "White" refers to non-Hispanic Whites)

Baldwin City

Baldwin City is located in Southeast Douglas County about 12 miles south of Lawrence.[17] Between 2010 and 2020, the city of Baldwin experienced an 8.2 percent increase in their population from 4,331 to 4,684 residents (see Table 3.2). This rise in the population is due primarily to an increase in persons of color – particularly Hispanic/Latinx residents and residents who identify as two or more races. On the other hand, the non-Hispanic White population dropped from 96.2 percent to 86.8 percent of the population. Nevertheless, the city makes up less than 5 percent of the population in Douglas County and covers less than 3 square miles, which is primarily composed of residential streets except for U.S. Highway 56 that passes near the downtown area.[18] Baldwin city is also home to a small private educational institution, Baker University, which houses about 1,000 students on-campus according to the school's Fall 2020 enrollment data.[19]

Eudora

Eudora is located in Eastern Douglas County, Kansas about 8 miles east of Lawrence.[20] Between 2010 and 2020, Eudora's population increased by about 8 percent from 6,063 to 6,551 residents (see Table 3.2). Once again, Eudora's population is significantly smaller than the city of Lawrence and makes up less than 3 square miles of land. The only major highway that runs through Eudora is U.S. Highway 10, which is a connecting highway from the Kansas City metropolitan area to Lawrence, Kansas. Like the rest of the county, most Eudora residents are non-Hispanic White, but this population has shrunk from 93.4 to 82.9 percent from 2010 to 2020. On the other hand, the Hispanic/Latinx population has nearly quadrupled from 2.9 percent to 11.8 percent the population, making it the fastest growing population and the second largest racial/ethnic group in Eudora (see Table 3.2). Less than 5 percent of the population is composed of non-Hispanic Black/African American, American Indian/Alaska Native, Asian, and two or more races.

[17] Baldwin City, 2022
[18] Kansas Department of Transportation, 2006
[19] Baker University Office of Institutional Research, 2022
[20] Eudora City, 2022.

Lawrence

As the largest city in Douglas County in terms of population and size, Lawrence's population has grown by about 13 percent from 86,426 to 97,348 residents between 2010 and 2020 and is made up of 33.56 square miles of land (see Table 3.2). Lawrence is located about 25 miles east of Topeka and 25 miles west of Kansas City with U.S. interstate highway 70 running through the city and connecting them to these major areas.[21] U.S. Highway 59 is another major highway, which runs north and south, that passes through Lawrence and the Kansas Department of Transportation works in partnership with Lawrence, Parsons and Atchison to keep it maintained. Like Baldwin and Eudora, Lawrence is primarily made up of non-Hispanic White residents, which have declined from 79.1 to 75 percent of the population. On the other hand, their Hispanic/Latinx and Asian population have experienced a 1 to 2 percent increase from 2010 to 2020 and currently make up about 6.7 and 6.4 percent of the population, respectively. Less than 10 percent of the population is composed of non-Hispanic Black/African American residents (4.7 percent) and residents belonging to two or more races (4.7 percent). Other racial/ethnic categories (American Indian/Alaska Native and other races) have experienced little change in the composition of the population from 2010 to 2020 and make-up the remaining 2.4 percent of the population.

In addition to the residential population, Lawrence is also home to the University of Kansas (KU), the largest public university in the state with 26,780 students enrolled in their undergraduate and graduate programs. The campus, which is settled on 1,000 acres of land, contributes to the economy, traffic pattens, and pedestrian patterns of Lawrence. According to the Fall 2021 enrollment, the student population at KU's Lawrence campus is largely represented by a White student population (67.7 percent), followed by Hispanic/Latinx students (8.7 percent), international students (7.2 percent), Asian/Asian American students (5.4 percent), students who identify as two or more races (5.0 percent), and African American students (4.6 percent). Less than two percent of the student population identifies as American Indian/Alaska Native or other racial/ethnic categories.[22]

[21] Lawrence City, 2022
[22] University of Kansas, 2022

While the KU student population contributes significantly to a rise in the residential population in Lawrence during the academic year, like many other universities, KU moved to online teaching on March 23, 2020 following the COVID-19 pandemic protocol. During the 2020-2021 academic year, KU moved one-third of their courses online, one-third were blended and held both in-person and online (HyFlex), and one-third were held in-person. Furthermore, most athletic and other university events were cancelled to avoid close contact and the spread of the COVID-19 virus. As a result, the campus population was well-below the average number during this time period making it difficult to account for their presence in the city's population counts. However, most classes switched back to in-person in the Fall of 2021 with the return of many students to campus.[23]

Lawrence is also home to Haskell Indian Nations University, a public tribal university with about 1,000 students representing more than 150 Native American tribes from across the country.[24] Similar to KU, Haskell University moved their classes online in March of 2020. However, most of the classes remained online during the 2020-2021 citing concerns with high levels of COVID-19 cases.[25] Although students were permitted to return to campus in the Fall of 2021, some of the classes remained online during the fall semester and the start of the spring semester. The university has a memorandum of understanding (MOU) with local law enforcement agencies. Nevertheless, faculty and staff members have shared their concerns with researchers about stops conducted by local police officers involving their students both on- and off-campus.

[23] University of Kansas, 2022
[24] Haskell Indian Nations University, 2022
[25] Shackelford-Nwanganga, 2022

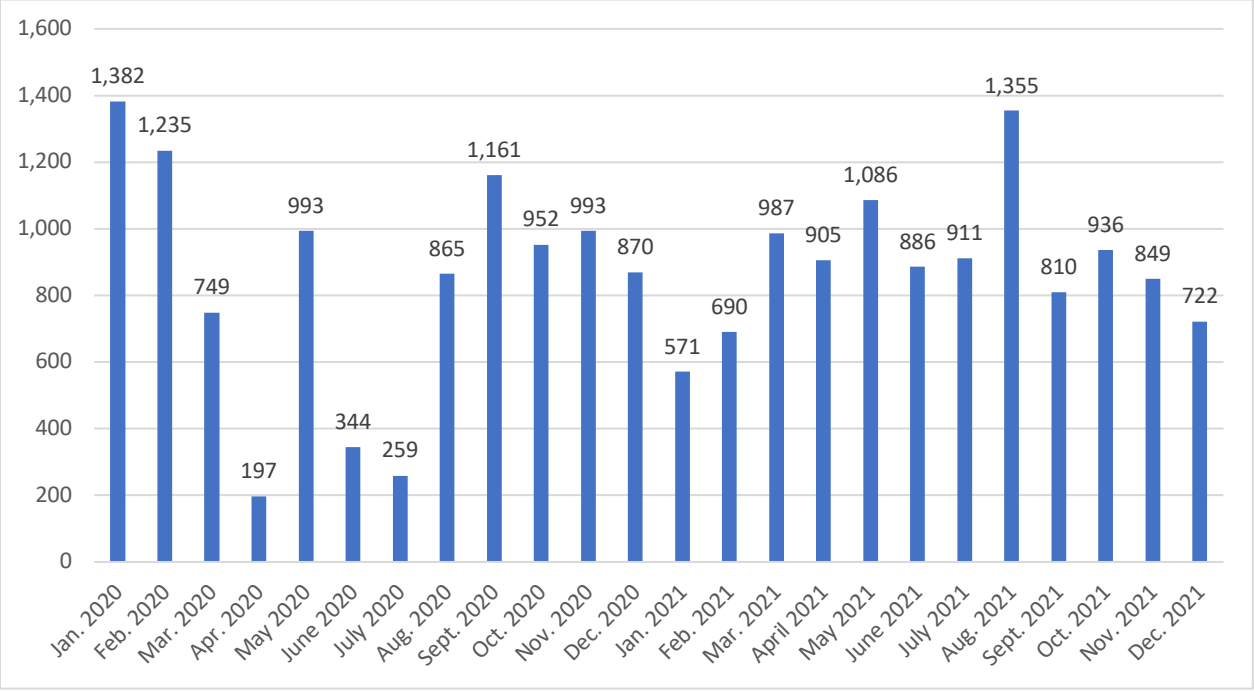
Table 3.2. Population Change in Douglas County, 2010-2020

	2010 U.S. Census Data				2020 U.S. Census Data				% Difference from 2010 to 2020			
	Douglas County	**Baldwin**	**Eudora**	**Lawrence**	**Douglas County**	**Baldwin**	**Eudora**	**Lawrence**	**Douglas County**	**Baldwin**	**Eudora**	**Lawrence**
Total population	**109,052**	**4,331**	**6,063**	**86,426**	**121,304**	**4,684**	**6,551**	**97,348**				
Hispanic or Latino	4.9%	1.2%	2.9%	5.5%	6.4%	4.7%	11.8%	6.7%	1.5%	3.5%	8.9%	1.2%
NH White	82.2%	96.2%	93.4%	79.1%	77.6%	86.8%	82.9%	75.0%	-4.6%	-9.4%	-10.5%	-4.1%
NH Black/African American	3.6%	1.3%	0.0%	4.4%	4.0%	1.5%	0.9%	4.7%	0.4%	0.2%	0.9%	0.3%
NH American Indian/Alaska Native	2.4%	0.5%	2.1%	2.7%	1.8%	1.0%	1.5%	2.0%	-0.6%	0.5%	-0.6%	-0.7%
NH Asian	3.8%	0.0%	0.3%	4.8%	5.2%	0.3%	0.6%	6.4%	1.4%	0.3%	0.3%	1.6%
NH Native Hawaiian/Other Pacific Islander	0.1%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	-0.1%	0.1%	0.0%	-0.1%
NH Some other race	0.2%	0.0%	0.0%	0.3%	0.6%	0.0%	0.0%	0.4%	0.4%	0.0%	0.0%	0.1%
NH Two or more races	2.8%	0.7%	1.3%	3.2%	4.4%	5.6%	2.3%	4.7%	1.6%	4.9%	1.0%	1.5%

IV. Pedestrian and Traffic Stops in Douglas County

From January 1, 2020 through December 31, 2021, Douglas County law enforcement agencies collected information on 20,708 pedestrian and traffic stops. The number of pedestrian and traffic stops conducted fell by about 85 percent from 1,382 stops in January 2020 to less than 200 stops in April 2020 (see Table 4.1). This significant decrease in stop activity is associated to the passage of stay-at-home restrictions in Douglas County and across the country due to the COVID-19 pandemic.[26] While the number of stops conducted increased over the following months, the number of stops remains below the pre-COVID-19 average with many agencies also facing challenges with budget cuts and staffing shortages. Furthermore, like other law enforcement agencies across the country, Douglas County agencies have started to consider making changes around police practices when an officer conducts a stop.

Figure 4.1. Total Number of Traffic Stops across Douglas County



When we look at the number of monthly stops conducted by each agency (see Table 4.1), only Baldwin PD has returned to pre-COVID-19 pandemic levels of traffic enforcement by

[26] Douglas County, 2020

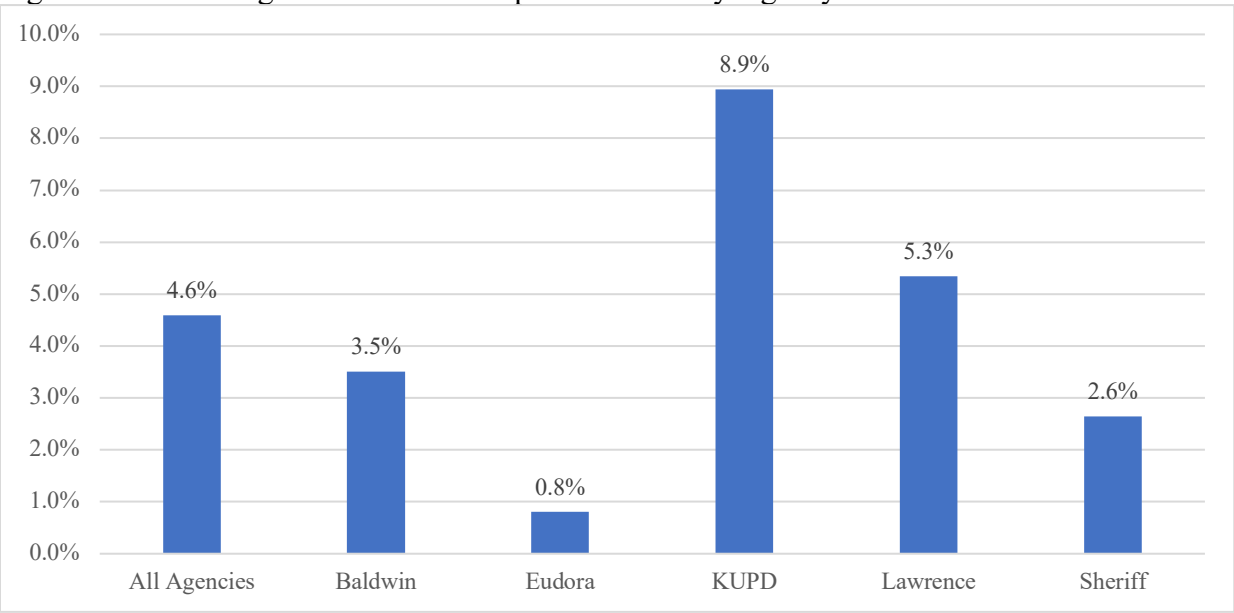
December of 2021. While we do not know what the optimum level of traffic enforcement is for each community, the COVID-19 pandemic has demonstrated that the levels of traffic enforcement in each community can shift rather dramatically. Subsequent analyses could determine if these shifts in traffic enforcement have impacted crime rates or the level and severity of traffic accidents in these communities.

Table 4.1 Total Number of Stops by Month, January 2020-December 2021

Month	All Agencies	Baldwin	Eudora	KUPD	LKPD	Sheriff
January 2020	1,382	21	95	189	543	534
February 2020	1,235	32	119	216	509	359
March 2020	749	11	54	81	469	134
April 2020	197	8	6	10	141	32
May 2020	993	7	10	22	858	96
June 2020	344	3	3	27	247	64
July 2020	259	4	32	21	91	111
August 2020	865	23	93	52	420	277
September 2020	1,161	30	67	138	726	200
October 2020	952	10	71	99	443	329
November 2020	993	62	110	111	273	437
December 2020	870	35	86	26	392	331
January 2021	571	22	32	36	325	156
February 2021	690	38	11	79	328	234
March 2021	987	53	8	84	479	363
April 2021	905	33	24	46	445	357
May 2021	1,086	63	18	103	558	344
June 2021	886	50	9	120	455	252
July 2021	911	32	65	80	428	306
August 2021	1,355	28	83	361	526	357
September 2021	810	27	35	149	309	290
October 2021	936	52	29	137	367	351
November 2021	849	70	32	145	273	329
December 2021	722	28	24	74	255	341
Total No. of Stops	**20,708**	**742**	**1,116**	**2,406**	**9,860**	**6,584**

According to national-level survey data on police contacts with the public, about 10 percent of all stops initiated by police officers involved a pedestrian stop.[27] On the other hand, less than 5 percent of all stops in Douglas County involved a pedestrian stop making up a total of 943 pedestrian stops (see Figure 4.2). However, there is some variation across agencies given the different sizes and landscapes of each jurisdiction in Douglas County. For example, Eudora PD conducted only 9 pedestrian stops during the study period, which made up less than 1 percent of their stop activity. In comparison, KUPD conducted 211 pedestrian stops, which made up about 9 percent of their stop activity. In order to better understand some of the differences in stop activity across law enforcement agencies in Douglas County, we provide an overview on the characteristics of pedestrian and traffic stops in the following section.

Figure 4.2. Percentage of Pedestrian Stops Conducted by Agency



Characteristics of Drivers/Subjects in Pedestrian and Traffic Stops

Findings from a national survey conducted by the Department of Justice on police contacts with the public reported that more than one-half of all individuals stopped by an officer were male (54.5 percent) and about two-thirds of the individuals stopped by an officer were non-Hispanic White (66.5 percent).[28] Compared to the national-level stop data, Douglas County law enforcement

[27] Harrell and Davis, 2020
[28] Ibid.

agencies reported stopping a larger percentage of males and non-Hispanic White pedestrians and drivers as shown in Table 4.2. According to the demographic patterns on pedestrian stops across the county, around three-quarters were male (74.2 percent), and three quarters were non-Hispanic White (75.3 percent). On the other hand, less than two-thirds (61.5 percent) of all drivers stopped were male and more than three-quarters of the drivers stopped (76.3 percent) were non-Hispanic White. Based on the data collected, persons of color made up a less than one-quarter of all individuals stopped for either a pedestrian or a traffic stop in Douglas County. However, there is some variation across agencies in terms of gender and race/ethnicity. For example, a greater percentage of traffic stops conducted by KUPD involved a female driver (40.5 percent), and a greater percentage of pedestrian stops conducted by the Sheriff's Office involved a female pedestrian in comparison to other local agencies. Also, a greater percentage of traffic stops conducted by Lawrence PD involved a person of color in comparison to other local agencies.

According to the national-level survey data on police initiated contacts with the public, findings indicate that less than one-quarter of all stops involved a person aged 16 to 24 (22.5 percent) and less than one-half of all stops involved a person aged 25 to 44 (40.8 percent).[29] Compared to the national-level data, a greater percentage of persons aged 15 to 24 were represented in pedestrian and traffic stops conducted by Douglas County law enforcement agencies (34.0 and 39.7 percent, respectively). As home to the largest university in the state of Kansas, this percentage is not surprising given the large presence college-aged students living in Douglas County while attending the University of Kansas (KU). On the other hand, around 40 percent of all pedestrian stops and 34 percent of all traffic stops involved a person aged 25 to 44. Additionally, nearly three-quarters of all pedestrians stopped (72.3 percent) and less than two-thirds of drivers stopped (60.5 percent) were Douglas County residents. About 16 and 28 percent of pedestrians and drivers stopped were from another county in Kansas, respectively, and 11 percent of pedestrians and drivers stopped were from a state outside of Kansas. Less than 1 percent of pedestrians and drivers stopped were recorded as being from another country.

[29] Harrell & Davis, 2020

Table 4.2. Driver/Subject Stop Characteristics, January 2020-December 2022

	Pedestrian Stops						Traffic Stops					
	All Agencies	**Baldwin**	**Eudora**	**KUPD**	**Lawrence**	**Sheriff**	**All Agencies**	**Baldwin**	**Eudora**	**KUPD**	**Lawrence**	**Sheriff**
Total No. of Stops	943	25	9	211	526	172	19,765	717	1,107	2,195	9,334	6,412
Gender												
Female	25.3%	24.0%	0.0%	24.6%	23.6%	33.1%	38.3%	37.7%	36.9%	40.5%	38.3%	37.9%
Male	74.2%	76.0%	88.9%	75.4%	76.0%	66.3%	61.5%	62.2%	63.1%	59.5%	61.5%	61.9%
Trans/Transgender	0.4%	0.0%	11.1%	0.0%	0.4%	0.6%	0.2%	0.1%	0.1%	0.0%	0.2%	0.3%
Race/Ethnicity												
American Indian	2.4%	0.0%	0.0%	0.9%	3.0%	2.9%	1.1%	0.1%	0.2%	1.0%	1.6%	0.8%
Asian or Pacific Islander	2.3%	0.0%	0.0%	6.2%	1.3%	1.2%	2.2%	1.0%	1.4%	4.3%	2.5%	1.3%
East Indian	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.4%	0.5%	0.5%	0.3%
Hispanic/Latinx Black	0.2%	0.0%	0.0%	0.0%	0.0%	1.2%	0.2%	0.0%	0.0%	0.0%	0.3%	0.2%
Hispanic/Latinx White	5.2%	4.0%	0.0%	4.3%	4.9%	7.6%	6.2%	6.4%	7.3%	4.3%	6.4%	6.4%
Middle Eastern	0.7%	0.0%	0.0%	1.4%	0.8%	0.0%	1.3%	0.6%	0.9%	2.3%	1.4%	0.9%
Multiple Race/Ethnicity	0.5%	0.0%	0.0%	0.0%	1.0%	0.0%	0.6%	0.0%	0.1%	0.1%	1.1%	0.0%
NH Black	13.3%	16.0%	11.1%	13.3%	14.1%	10.5%	11.6%	5.6%	5.7%	12.0%	14.1%	9.5%
NH White	75.3%	80.0%	88.9%	73.9%	74.9%	76.7%	76.3%	86.3%	84.1%	75.3%	72.0%	80.4%
Residency												
Douglas County	72.3%	68.0%	100.0%	62.6%	77.4%	68.0%	60.5%	54.8%	49.3%	49.7%	70.4%	52.5%
Other Kansas County	16.0%	20.0%	0.0%	19.9%	12.4%	22.7%	27.8%	32.4%	39.1%	30.8%	18.7%	37.7%
Out-of-State	11.1%	8.0%	0.0%	16.6%	10.1%	8.7%	11.4%	12.6%	11.4%	19.1%	10.6%	9.7%
International	0.5%	4.0%	0.0%	0.9%	0.2%	0.6%	0.3%	0.3%	0.2%	0.3%	0.3%	0.1%
Age Group												
Under 15	0.6%	0.0%	0.0%	0.0%	0.6%	1.7%	0.1%	0.3%	0.0%	0.0%	0.1%	0.1%
15-24	34.0%	60.0%	55.6%	71.6%	20.3%	25.0%	39.7%	44.4%	28.3%	68.7%	39.5%	31.6%
25-34	21.3%	4.0%	0.0%	9.5%	25.3%	27.3%	19.2%	17.7%	21.2%	12.5%	18.9%	21.8%
35-44	18.0%	4.0%	22.2%	7.6%	21.7%	21.5%	14.4%	12.4%	19.0%	8.1%	13.0%	17.8%
45-54	10.9%	16.0%	22.2%	3.8%	12.5%	13.4%	9.6%	9.2%	10.9%	4.3%	8.5%	12.8%
55-64	5.2%	12.0%	0.0%	5.2%	4.2%	7.6%	7.2%	7.8%	10.3%	3.9%	6.1%	9.3%
65 and over	1.2%	4.0%	0.0%	1.9%	0.6%	1.7%	4.8%	7.8%	6.2%	2.4%	4.1%	6.1%

Characteristics of Pedestrian and Traffic Stops

Looking at the characteristics of pedestrian and traffic stops, there are numerous reasons for changes to patterns and trends in police activity throughout the year. Decisions like increasing traffic enforcement activity in a neighborhood in response to an accident, community request, and funding from statewide campaigns such as "Click-It or Ticket" can impact the level of enforcement in a particular month. It is important to examine the data using a smaller unit of analysis, such as an agency, to obtain a better understanding on what policies and/or practices may have affected this fluctuation in stop activity. Below, we provide a description of pedestrian and traffic stop activity in each of the five police agencies as shown in Table 4.3.

Basis for Stop. According to national-level survey data, more than 30 percent of all pedestrian stops were based on an investigation of a suspicious person and about 13 percent of all street stops involved a call for service/assistance. Compared to the national-level survey data, most pedestrian stops reported in Douglas County were based on a violation of city/town ordinance (32.1 percent), followed by an investigation of a suspicious person (30.9 percent) and a call for service (19.2 percent). These were reported as the primary basis for all pedestrian stops except for Baldwin PD, Eudora PD, and the DCSO. While 40 percent of all pedestrian stops involved a call for service and 20 percent of all pedestrian stops involved an investigation of a suspicious person, 16 percent of all pedestrian stops by Baldwin PD officers included motorist assist or a courtesy call. DCSO and Eudora PD, on the other hand, reported a greater percentage of warrants served to individuals (23.8 and 11.1 percent, respectively) in comparison to the other three agencies.

Of the 19,765 traffic stops conducted in Douglas County, most of the stops involved speeding (40.2 percent) followed by other traffic violations such as failure to stop at a stop sign (21.5 percent) and equipment or inspection violations (20.0 percent). Similarly, national-level survey found that most traffic stops involved speeding (40.9 percent) followed by other traffic violations such as failure to stop at a stop sign (25.3 percent) and equipment violations (12.2 percent). Yet, there is some variation across agencies given the size and scope of their jurisdictions and main responsibilities. While one-quarter to one-half of all traffic stops involved a driver caught for speeding more than 10 miles per hour over the speed limit in four of the five agencies, 13.4 percent of all traffic stops by KUPD involved a driver caught for speeding. Given the size and

layout of the campus as well as the type of traffic enforcement conducted on-campus, this is not surprising as it would be difficult to speed more than 10 miles per hour above the speed limit KU's on-campus. Nevertheless, KUPD like many other local law enforcement agencies consider speeding under 10 miles per hour over the speed limit as highly discretionary and therefore, officers are less likely to stop a vehicle for this reason alone. On average, less than 3 percent of all traffic stops involved drivers speeding less than 10 miles per hour over the speed limit in Douglas County. On the other hand, speeding more than 10 miles per hour over the speed limit is considered a low discretionary stop and therefore, drivers are at a greater risk of being pulled over by a police officer by engaging in this behavior.

Additionally, traffic stops often based on greater discretion, as indicated in the literature, are equipment or inspection violations and other traffic violations (see Section II for more information on pre-textual stops). Equipment violations generally include traffic stops due to defective equipment such as headlight or taillight. In Douglas County, the number of stops varied by agency with more than one-quarter of all traffic stops conducted by Baldwin PD and KUPD involving equipment or inspection violations (27.8 and 32.9 percent, respectively) and less than one-quarter of all traffic stops conducted by Eudora PD, Lawrence PD, [30] and DCSO involving an equipment or inspection violation (21.9, 20.0, and 12.6 percent, respectively). "Other traffic violations" also varied across agencies in Douglas County with almost one-half of all traffic stops by KUPD reported as "other" (41.9 percent) and about one-tenth of all traffic stops reported by DCSO recorded as "other" (12 percent). At the beginning of the study, when it became clear that many stops were being recorded as "other traffic violations," the research team added an additional field to the data collection protocol asking officers and deputies to specify the basis for those stops. Further analysis of this additional data field indicated that the most common reason for traffic stops that were recorded as "other traffic violations" were failure to stop at a stop sign (19.2 percent), driving without headlights (12.5 percent), and violating a traffic control device (10 percent). Future research in this area should include some additional reasons for the stop that agencies should

[30] According to the Lawrence Municipal Court, drivers may have their charges dismissed for a defective equipment violation if repairs are made and approved by an officer from the Police Department within 72 hours of the violation date and the driver provides proof of repair to the Court Clerk's office prior to their scheduled court appearance.

consider including to the existing categories in the data collection form under basis for stop (see this recommendation in Section VI).

Duration of the Stop. While most traffic stops concluded in less than fifteen minutes, on average, across all Douglas County agencies, two-thirds of all pedestrian stops concluded in less 15 minutes in three of the five agencies. Most pedestrian stops conducted by DCSO and KUPD lasted more than 15 minutes, 55.2 and 61.1 percent, respectively. On the other hand, less than 40 percent of all pedestrian stops conducted by Baldwin PD, Eudora PD, and Lawrence PD lasted more than 15 minutes. On average, around 10 percent of all traffic stops lasted longer than 15 minutes in Douglas County. Further analysis of this data indicates that these stops often involved the seizure of a vehicle, due to a lack of a registration for example, or the arrest of the driver/pedestrian for an outstanding warrant.

Outcome of Stop. Contrary to national-level survey data which reports that nearly one-half of all traffic stops received a citation (48.8 percent), less than one-quarter of all traffic stops in Douglas County received a citation (22.4 percent).[31] Nearly three-quarters of all traffic stops resulted in a verbal or written warning (72.4 percent) and the remaining traffic stops resulted in no action (2.4 percent), were given a notice to appear (NTA) (2.0 percent), resulted in an arrest (1.9 percent), and/or were arrested following a warrant (0.3 percent). When we look at the outcome of the traffic stops by jurisdiction, there is some variation across the outcome of stops. For example, more than 80 percent of all traffic stops by Baldwin PD and Eudora PD resulted in a verbal or written warning (83.4 and 82.1 percent, respectively) while less than three-quarters of all traffic stops by KUPD and Lawrence PD resulted in a verbal or written warning (74.9 and 65.2 percent, respectively). Consequently, traffic stops made by KUPD and Lawrence PD were more likely to receive a citation (21.7 and 28.3 percent, respectively).

[31] Davis et al., 2018

Table 4.3. Characteristics of Pedestrian and Traffic Stops by Agency

	Pedestrian Stops						Traffic Stops					
	All Agencies	**Baldwin**	**Eudora**	**KUPD**	**Lawrence**	**Sheriff**	**All Agencies**	**Baldwin**	**Eudora**	**KUPD**	**Lawrence**	**Sheriff**
Total No. of Stops	**943**	**25**	**9**	**211**	**526**	**172**	**19,765**	**717**	**1,107**	**2,195**	**9,334**	**6,412**
Basis for Stop												
APB or BOLO*	1.6%	4.0%	0.0%	0.0%	2.5%	0.6%	0.2%	0.8%	0.1%	0.0%	0.2%	0.4%
Call for Service	19.2%	40.0%	0.0%	33.6%	9.1%	30.2%	0.6%	1.4%	0.1%	0.0%	0.7%	0.7%
Equipment/Inspection Violation	2.9%	0.0%	0.0%	0.0%	4.4%	2.3%	20.0%	27.8%	16.9%	32.9%	21.9%	12.6%
Motorist Assist or Courtesy	5.6%	16.0%	0.0%	0.0%	4.6%	14.5%	0.5%	0.3%	0.3%	0.1%	0.5%	0.6%
Registration Violation	0.6%	0.0%	0.0%	0.0%	0.8%	1.2%	8.9%	8.6%	4.5%	6.3%	11.0%	7.5%
Special Detail or Directed Patrol	1.3%	0.0%	0.0%	4.7%	0.4%	0.0%	9.4%	0.0%	0.3%	4.1%	18.1%	1.2%
Speeding - 10mph or greater	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	37.5%	25.8%	56.0%	13.4%	27.6%	58.3%
Speeding - less than 10mph	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	2.8%	2.3%	0.8%	3.3%	2.6%
State Statute Violation	5.3%	20.0%	11.1%	10.9%	2.9%	3.5%	3.5%	7.9%	0.9%	0.1%	3.2%	5.0%
Suspicious Person	30.9%	20.0%	77.8%	19.9%	38.8%	19.2%	0.9%	0.6%	0.1%	0.0%	1.7%	0.4%
Violation of City/Town Ordinance	32.1%	12.0%	0.0%	52.1%	35.9%	0.6%	2.8%	9.5%	0.1%	2.8%	4.5%	0.1%
Warrant	9.7%	8.0%	11.1%	6.2%	6.5%	23.8%	0.4%	0.4%	0.2%	0.3%	0.5%	0.5%
Other Traffic Violation	5.4%	4.0%	0.0%	2.4%	7.2%	4.1%	21.5%	16.7%	22.6%	41.9%	23.4%	12.0%
Duration of Stop												
0-15 min	61.5%	64.0%	66.7%	40.3%	74.9%	45.9%	90.3%	86.6%	88.6%	94.4%	89.5%	90.7%
16-30 min	20.8%	0.0%	11.1%	33.2%	15.4%	25.6%	6.7%	8.8%	9.3%	3.1%	6.9%	6.9%
Over 30 min	18.6%	40.0%	22.2%	28.4%	9.9%	29.7%	3.0%	4.5%	2.1%	2.3%	3.6%	2.3%
Outcome of Stop												
Arrest Driver/Passenger	9.1%	16.0%	0.0%	19.4%	4.6%	9.9%	1.9%	2.1%	1.5%	1.4%	2.0%	1.9%
Arrest following a warrant	9.0%	16.0%	11.1%	4.7%	7.2%	18.6%	0.3%	0.0%	0.2%	0.4%	0.4%	0.2%
Citation	3.8%	0.0%	0.0%	7.6%	2.7%	3.5%	22.4%	10.9%	15.9%	21.7%	28.3%	16.5%
Emergency/Mental Detention	0.6%	0.0%	0.0%	1.9%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
No Action	39.2%	36.0%	66.7%	19.9%	41.3%	55.8%	2.4%	1.3%	1.0%	0.7%	3.8%	1.3%
NTA	9.3%	8.0%	11.1%	32.2%	3.0%	0.6%	2.0%	3.1%	0.7%	1.5%	2.6%	1.4%
Verbal/Written Warning	32.1%	32.0%	11.1%	17.5%	45.1%	11.6%	72.3%	83.3%	82.1%	74.7%	65.2%	79.0%
Total No. of Searches	29.5%	36.0%	44.4%	35.5%	22.2%	42.4%	4.8%	4.9%	3.0%	3.2%	6.2%	3.8%

*APB refers to “all-points bulletin” and BOLO refers to “be on the lookout”

Turning to pedestrian stops, about 40 percent of all pedestrian stops at the national-level and in Douglas County resulted in no enforcement action.[32] Nearly one-third of all pedestrian stops in Douglas County received a verbal or written warning while only 21 percent of all pedestrian stops received a warning according to national-level survey data. A smaller percentage were given a notice to appear (9.3 percent), resulted in an arrest (9.1 percent), resulted in an arrest following a warrant (9.0 percent), and/or were issued a citation (3.8 percent) according to Douglas County pedestrian stop data.

Characteristics of Pedestrian and Traffic Stop Searches

According to a report by the Department of Justice, searches took place in about 3 to 4 percent of all traffic stops and about 10 to 20 percent of all pedestrian stops.[33] Similar to these findings, police officers in Douglas County conducted 959 searches during the two-year study period, making up about 4.8 percent of all traffic stops reported across the county. As indicated in Table 4.2, Lawrence PD conducted the most searches, making up about 6.2 percent of their total traffic stops, and Eudora PD conducted the fewest searches, making up about 3.0 percent of their total traffic stops. On the other hand, about 29.5 percent of the pedestrian stops resulted in a search. It is interesting to note that pedestrian stops were six times more likely to involve a search rather than traffic stops.

Reason for Search

The stop data collection form allowed officers to indicate the basis for their search, choosing between consent, inventory/tow, probable cause, terry frisk, and a search incident to an arrest (see Table 4.3). Looking at pedestrian stops in Douglas County, about one-half of the 278 searches were following an arrest while one-quarter were based on probable cause. In comparison, more than one-half of the 959 searches during a traffic stop were based on probable cause (58.2 percent) and one-third of the searches were following an arrest (34.0 percent). About 17 percent of searches during a pedestrian or traffic stop were based on consent from the individual. However, there is some variation in reasons for searches across agencies. For example, most searches during

[32] Davis et al., 2018; Langton & Durose, 2013
[33] Ibid.

a traffic stop were based on probable cause and/or following an arrest in all agencies except for Lawrence PD and DCSO, which included consent in about one-fifth of their searches. On the other hand, most pedestrian searches were incident to an arrest and/or based on probable cause except for searches conducted by officers in Eudora PD, which included consent in one-half of the searches conducted. Lawrence PD and DCSO also recorded consent as one of the reasons for conducting a search following a pedestrian stop in 25 and 15 percent of the searches, respectively.

Evidence or "Hit Rates"

If a search was conducted during a stop, officers were asked to record what type of contraband was found. Contraband can include items such as alcohol, drugs or drug paraphernalia, money, firearms, weapons other than firearms, or other contraband items found during a search following a stop. The "hit rate," as it is often referred to, represents the proportion of searches or frisks that result in one or more types of contraband being found. Previous research on racial profiling found that searches where nothing is found can damage a community's trust in the police. Analysis of hit rates allows law enforcement agencies to assess the productivity of their search practices (see table 4.4).

Based on the total number of searches conducted by police officers in Douglas County, about 44 percent of the pedestrian searches and 60 percent of the traffic stop searches resulted in contraband being found. This hit rate is substantially higher than the national average of one-quarter of all searches resulting in contraband being found. Again, we see variation across the law enforcement agencies in Douglas County with more than one-half of all searches conducted by Baldwin PD (62.9 percent), Lawrence, PD (63.5 percent), and DCSO (57 percent) resulted in contraband being found. Lawrence PD was also more likely to find contraband following a search at a pedestrian stop (60.7 percent) while only one-third of all pedestrian searches by Baldwin PD, KUPD, and DCSO found contraband.

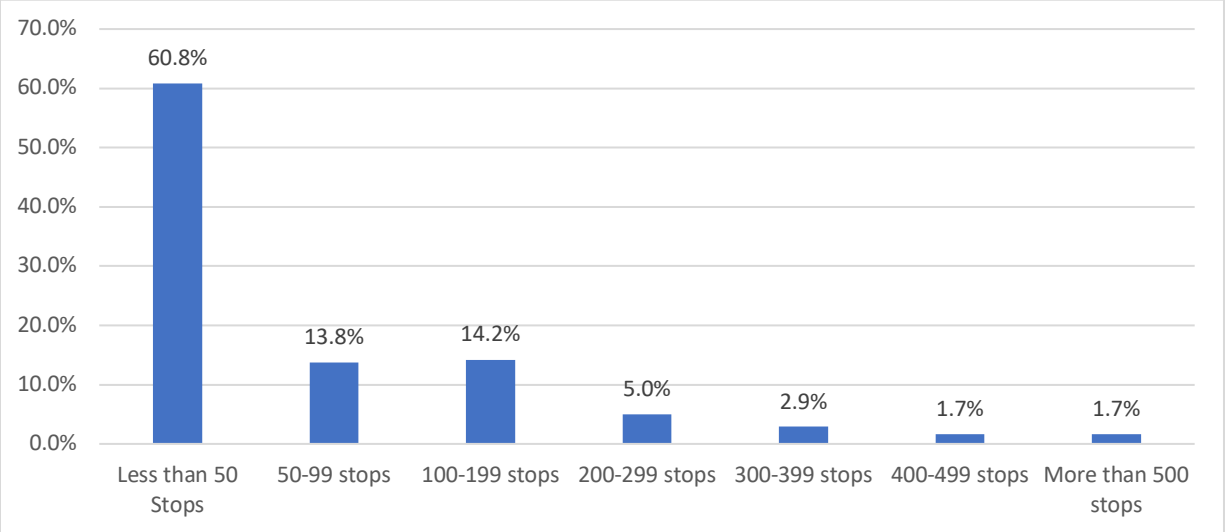
Table 4.4. Search Characteristics for Pedestrian and Traffic Stops by Agency

	Pedestrian Stops						Traffic Stops					
	All Agencies	**Baldwin**	**Eudora**	**KUPD**	**Lawrence**	**Sheriff**	**All Agencies**	**Baldwin**	**Eudora**	**KUPD**	**Lawrence**	**Sheriff**
Total No. of Searches/Frisks	**278**	**9**	**4**	**75**	**117**	**73**	**959**	**35**	**33**	**71**	**576**	**244**
Reason for Search/Frisk												
Consent	17.6%	0.0%	50.0%	9.3%	24.8%	15.1%	16.9%	0.0%	6.1%	1.4%	19.8%	18.4%
Probable Cause	28.8%	22.2%	0.0%	21.3%	42.7%	16.4%	58.2%	57.1%	54.5%	42.3%	62.8%	52.5%
Terry Frisk	6.5%	11.1%	0.0%	1.3%	8.5%	8.2%	5.0%	2.9%	9.1%	11.3%	3.5%	6.6%
Inventory/Tow	1.8%	0.0%	0.0%	0.0%	1.7%	4.1%	3.0%	11.4%	3.0%	0.0%	2.4%	4.1%
Search Incident to Arrest	55.4%	66.7%	50.0%	68.0%	41.9%	63.0%	34.0%	40.0%	51.5%	45.1%	27.4%	43.0%
Evidence Found	43.5%	33.3%	0.0%	33.3%	60.7%	30.1%	60.0%	62.9%	48.5%	45.1%	63.5%	57.0%
Alcohol	8.3%	11.1%	0.0%	10.7%	10.3%	2.7%	15.8%	8.6%	12.1%	18.3%	14.4%	20.1%
Drugs/Drug Paraphernalia	32.0%	22.2%	0.0%	13.3%	48.7%	27.4%	44.9%	54.3%	45.5%	26.8%	49.3%	38.5%
Firearm	2.5%	0.0%	0.0%	0.0%	6.0%	0.0%	5.0%	2.9%	0.0%	0.0%	6.1%	4.9%
Money	1.4%	0.0%	0.0%	0.0%	3.4%	0.0%	0.3%	0.0%	0.0%	0.0%	0.5%	0.0%
Other	3.6%	0.0%	0.0%	6.7%	4.3%	0.0%	1.8%	0.0%	0.0%	1.4%	1.7%	2.5%
Weapon other than Firearm	4.3%	0.0%	0.0%	4.0%	6.0%	2.7%	3.3%	2.9%	3.0%	0.0%	3.6%	3.7%
No Evidence Found	56.5%	66.7%	100.0%	66.7%	39.3%	69.9%	40.0%	37.1%	51.5%	54.9%	36.5%	43.0%

Measuring Officer Productivity

Although there is limited information on the demographic characteristics of the officers' conducting pedestrian and traffic stops, this data collection offers law enforcement agencies with another set of metrics beyond raw outputs such as arrests and citations to examine officer productivity.[34] Over the course of the study, 240 officers recorded information on pedestrian and traffic stops across Douglas County. While all officers recorded at least one stop from January 1, 2020 to December 31, 2021, a small percentage of officers were largely responsible for most of the stops that took place. As shown in Figure 4.3, more than one-half of the officers (60.8 percent) conducted fewer than 50 of the pedestrian and traffic stops during the two years of data collection. On the other hand, about 6 percent of officers conducted more than 300 stops during the two-year study period. Although officers are assigned different responsibilities (e.g., traffic enforcement unit) within their agencies, this data collection can be a useful tool for agencies to measure the two key dimensions of officer productivity: efficiency and effectiveness. By using data on stop characteristics reported by officers, agencies may consider using this data to measure productivity depending on the priorities of the command staff.

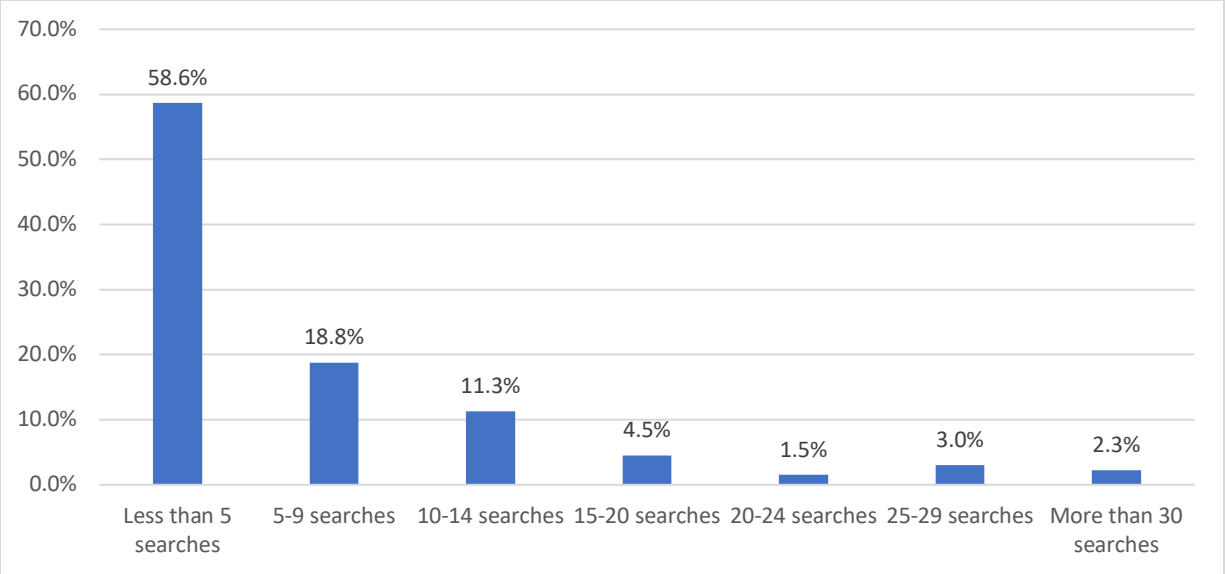
Figure 4.3. Percentage of Officers Conducting a Pedestrian or Traffic Stop



[34] It is important to note that there is considerable variation in the literature on what constitutes police productivity. Nevertheless, it is important to use multiple indicators that capture the complex role of police officers in measuring productivity. It is up to the agencies to decide

Similarly, the search data indicates that less than one-half of the 240 officers conducted at least one search during the study period (see Figure 4.4). Of the 133 officers who conducted a search, more than one-half of the officers conducted less than 5 searches (58.6 percent) while about 5 percent of officers conducted 25 or more searches. It is important for agencies to consider whether this information might provide an additional measure to operationalize productivity in their agencies. For example, agencies may consider looking at hit rates among officers conducting searches following a pedestrian or traffic stop to determine what officer-level or stop-level characteristics are associated to higher hit rates. This measure not only provides agencies with an opportunity to gauge an officer's productivity, but also determine whether the priorities that are being set by the command staff are effectively being communicated and whether there are any issues with training being offered to new officers on conducting stops and/or searches.

Figure 4.4. Percentage of Officers Conducting a Search/Frisk



Summary

This review of the data collected on 20,708 pedestrian and traffic stops in Douglas County from January 1, 2020 to December 31, 2021 provides a wealth of information that is relevant for community members, policymakers, and practitioners to better understand their agencies and communities. While county-level data reflects similar patterns as those found at the national-level, there is some variation across the five agencies – Baldwin PD, Eudora PD, KUPD, Lawrence PD, and DCSO – in stop and search characteristics, given the size and makeup of their agencies and

communities. In addition to the demographic makeup and size of these communities previously discussed in Section III, Douglas County agencies also vary from small to midsize agencies with small agencies, such as Baldwin PD, Eudora PD, and the KUPD, who typically employ less than 25 sworn officers, and midsize agencies, such as Lawrence PD and the Douglas County Sheriff's Office, who typically employ 50 to 200 sworn officers.[35] As communities and agencies continue to grow in size and more diverse, it is important to examine how this effects the pedestrian and traffic stop data in the near future. The following chapter will further examine some the individual- and agency-level characteristics that are associated to traffic stops using different methodological approaches to determine whether there is any evidence of racial/ethnic disparities.

[35] Although there is no universal standard for the structure, size, or governance of law enforcement agencies in the United States, the International Association of Chiefs of Police (2018) categorize agencies in terms of size and population served.

V. Methodology & Findings

Racial profiling is a significant concern for many law enforcement agencies across the country. Using different methodological approaches, numerous studies have confirmed that racial disparities exist in the practice of pedestrian and traffic stops.[36] Scholars have indicated that these disparities may be due to several different factors including institutional racism, individual racial bias, either conscious of unconscious on the part of the officer, and/or the enforcement of departmental policies.[37] Yet, not all agencies are collecting information on the driver's race/ethnicity in a pedestrian and/or traffic stop. As a result, it is important to start and continue collecting data to determine whether there are disparities; and if they exist it is vital to determine if they are caused by individual or institutional bias.

Nevertheless, measuring whether racial disparities exist in traffic stops remains challenging.[38] Many studies compare the proportion of drivers of different races and ethnicities to the census data for that jurisdiction. While this is a relatively straightforward calculation, it is often inaccurate. For example, the distribution of drivers by race/ethnicity within an area may differ from those drivers who reside in that same area making it challenging to use census data. Additionally, the distribution of drivers by race/ethnicity may vary over time, driving behaviors may vary across racial/ethnic groups, and the exposure to police varies across racial/ethnic groups. The current study employs numerous methodological approaches to ascertain whether there are racial disparities and assess when, where, and how widespread they may be. In the following sections, we discuss each methodological approach, the limitations, and the findings using traffic stop data from Douglas County, Kansas. Due to the small number of pedestrian stops conducting during the study period (n=951), we excluded these stops in the analyses below. Therefore, the findings are based on information collected on the 19,757 traffic stops that took place during the two-year study period from January 1, 2020 to December 31, 2021.

[36] Alpert et al., 2007; Roh & Robinson, 2009; Smith & Petrocelli, 2001; Tillyer & Klahm, 2011
[37] Doyle & Nembhard, 2021
[38] Engel et al., 2002; Ramirez et al., 2000

Benchmarking Analyses

Researchers have used several control groups, or benchmarks, to approximate the driving population. One of the most reliable estimates of the driving population is, unfortunately, expensive and labor intensive because it involves observing drivers and traffic violators to approximate the population of drivers available to be stopped. Previous studies using this benchmark have faced limitations and, as a result, have focused on observing drivers in certain locations, such as intersections with a high density of traffic, and at certain times of the day, such as the daytime when the lighting conditions permit for the most accurate estimation of the driver's race/ethnicity, to measure the driving population for the area under study. Therefore, this benchmark is best applied in local settings, but is difficult to replicate at the county-level.

Traffic Accident Data. Another benchmark used in studies that is more cost effective involves traffic accident or crash data to estimate the racial and ethnic composition of the driving population. To assess the accuracy of using crash data as a benchmark for traffic stop data, Alpert and colleagues (2004) conducted a study comparing demographic data from not-at-fault drivers in two vehicle crashes to observational data gathered at 11 high volume intersections in Miami-Dade County, Florida. The study found that the percentage point difference across drivers and crash victims was very small (less than 2 percent). When data from all intersections were aggregated, the overall difference between the percentage of drivers observed and those involved in traffic accidents (as victims) was also small and statistically insignificant. They found support for these data to serve as a less costly and more comprehensive estimate of the driving population than traffic observation methods currently provide. Nevertheless, due to the underreporting of traffic accident data in the current study, researchers could not use this method of benchmarking traffic stops to draw definitive conclusions on racial profiling in the area (see Appendix B for more information on the traffic accident data).

Residential Driving Population. Some studies have dealt with this challenge by limiting the analysis to stops of residents compared to the census population. Unfortunately, the data collection form in this study only collected information on whether the driver is a resident of Douglas County rather than the city/town where the driver resides. When we look at the disparity in stops compared to the population of Douglas County, we do find some disparities. First, we

limit the census data to the Douglas County population that is 15 years or older to better reflect the driving population in Kansas.[39] Next, we break down the driving population by race/ethnicity to examine whether any racial disparities exist.[40] We find White drivers were stopped at a rate almost the same as the White population of Douglas County, 81.8 and 82 percent, respectively. When we look at the stops of Black drivers, we see a significant disparity with Black drivers making up about 12 percent of the drivers stopped in Douglas County over the study period but only making up about 4 percent of the driving age population in Douglas County. Therefore, Black drivers were stopped 2.73 times more than would have been expected given the residential driving population size. Since we do not have information on the residency of the driver, we cannot conclude whether this disparity in stops of Black drivers is similar in all agencies or is more pronounced in one or more jurisdictions.

Table 5.1. Disparity between Residential Population

	Total Population	15 years and over	% 15 years and over	Traffic Stops	% Traffic Stops	Disparity	Ratio
Total	**121304**	**102875**	**100.0%**	**11961**	**100.0%**		
White	98416	84356	82.0%	9785	81.8%	-0.2%	1.00
Black	5231	4466	4.3%	1419	11.9%	7.5%	2.73
American Indian or Alaska Native	2550	2353	2.3%	157	1.3%	-1.0%	0.57
Asian or Pacific Islander	6426	5601	5.5%	306	2.6%	-2.9%	0.47
Two or more races	6982	4471	4.3%	85	0.7%	-3.6%	0.16

Multivariate Analyses

Other scholars have also examined whether there is racial or ethnic bias in traffic stops by isolating the significant predictors associated to traffic stops. Although the primary focus is to test whether the driver's race/ethnicity was a significant predictor in traffic stops, studies have

[39] Although the minimum driving age in Kansas without any restrictions is 17 years of age, residents can drive at the age of 15 without a licensed adult while meeting certain restrictions (e.g., traveling to/from school/work/religious institution and restricted hours) and after obtaining the necessary documentation (for more information, visit: https://www.ksrevenue.gov/dovgdl.html).

[40] Due to the available information from the U.S. Census Bureau (2010, 2020) at the county-level, the racial/ethnic categories Hispanic/Latinx population. For example, White and Black population categories include Hispanic/Latinx White and Hispanic/Latinx Black, respectively. Therefore, the stop data was also re-categorized accordingly to include Hispanic/Latinx White and Hispanic/Latinx Black to the White and Black populations, respectively.

discovered that other demographic characteristics influence traffic stop decision-making such as the driver's gender, age, residency status, and vehicle registration. Stop characteristics are also commonly associated to traffic stop decision making such as the basis for stop (e.g., equipment violation), time of day, location of the stop, day of the week, whether the stop occurred during the daytime or nighttime, and whether contraband was found. Studies involving traffic stop data from more than one agency also included controls for possible variation across agencies given different policies, practices, and training provided to officers when making a traffic stop. Additionally, studies have included local controls such as arrest or crime rates given its impact on police officer's decision making when conducting a stop.

Nevertheless, there are certain limitations in the application of this approach using the current traffic stop data. First, the data is self-reported by the officers. Although each law enforcement agency was provided with a monthly memo summarizing their stop data to confirm whether any variables were mischaracterized on the stop data collection form during the two-year study period, anomalous cases may still exist in the data. Second, information on the officers was not collected capturing demographic characteristics and levels of experience (e.g., years of service). Generally, this information is not available to researchers, but studies have shown that certain officer-level characteristics are significant in shaping some of the decision making during a traffic stop. However, there have been mixed findings on some of these characteristics (e.g., gender, race/ethnicity) in relation to outcomes in traffic stops (e.g., citation, search, etc.). For this reason, we recommend an officer-level analysis by each agency in the areas where disparities are identified. Third, the data collection period encompassed the COVID-19 pandemic and its immediate aftermath; it is possible that this may have impacted reporting practices and the decision making in traffic stops. To minimize the impact this may have had on traffic activity, the current study was extended an additional year as noted earlier. It remains to be seen whether future analyses identify different patterns and trends in traffic activity as we move even further away from the initial effects of the COVID-19 pandemic.

Using logistic regression models to predict the likelihood that a citation was given, an arrest was conducted, and a discretionary search took place, Table 5.2 shows the results for these outcomes while controlling for characteristics on the driver, stop, and agency as noted earlier. The primary focus of these analyses, persons of color, was measured using a dummy variable to reflect

whether the driver was a person of color or not.[41] Results indicate that the odds that drivers searched were persons of color following a traffic stop was 1.59 times greater than drivers who were not persons of color, net of other variables in the analysis. On the other hand, the odds of persons of color being cited or arrested following a traffic stop were not significant after controlling for other variables in the analyses. As shown in numerous studies, being a male driver was a significant predictor of the stop resulting in a citation, arrest, or search, while controlling for other variables. Younger drivers were also significantly more likely to be issued a citation or searched and older drivers were significantly more likely to be arrested. Contrary to public opinion, a driver with an out-of-state license or registration was not a significant predictor for stops resulting in a citation, an arrest, or a search. Rather, Kansas license holders were significantly more likely to be cited. While traffic stops resulting in a citation were significantly more likely to occur during the daylight hours, arrests and searches were significantly more likely to occur at nighttime.

Looking at stop characteristics, drivers stopped for an equipment/inspection violation or other traffic violation were less likely to receive a citation while drivers stopped for speeding more than 10 mph over the speed limit were more likely to receive a citation. On the other hand, drivers stopped for speeding more than 10 mph over the speed limit were less likely to be arrested or searched. Drivers stopped for an equipment/inspection violation or other traffic violation were also less likely to be arrested. As expected, contraband found on drivers stopped increased the chances that the driver would be arrested or searched. Not surprisingly, higher arrest rates meant that a driver was more likely to be issued a citation (1.65 times greater) or arrested (1.99 times greater) while controlling for other variables. On the other hand, searches were not significantly associated to arrest rates. While officers from Eudora PD, KUPD, Lawrence PD, and DCSO were more likely to issue a citation than Baldwin PD (set as the reference category) while controlling for other variables, neither of the individual agencies were significantly related to traffic stops resulting in an arrest or search.

[41] As suggested in prior research (Barnum & Perfetti, 2010; Novak, 2004, Schafer et al., 2006), we conducted the analyses with other categories of persons of color (for example, including all racial/ethnic groups except for Whites and Asians) and no substantive differences were found in the results.

Table 5.2. Logistic Regression Analysis for Correlates Predicting Citations, Arrests, and Searches

	Citation		Arrest		Discretionary Search	
	OR		OR		OR	
Person of color	1.050		1.224		1.586	**
Driver's age	0.990	***	1.009	*	0.969	***
Male driver	1.309	***	1.633	***	1.447	***
Out-of-state license	0.772	**	0.731		1.107	
Out-of-state registration	0.956		0.845		1.269	
Daylight	1.954	***	0.450	***	0.642	**
Day of the week						
Monday	1.199	*	0.525	**	1.139	
Tuesday	1.122		0.745		1.128	
Wednesday	1.049		0.564	**	1.569	
Thursday	1.009		0.647		1.388	
Friday	1.138		0.579	**	1.335	
Saturday	1.054		0.859		1.197	
Agency						
Eudora PD	1.712	***	1.565		1.147	
KUPD	5.436	***	1.542		0.879	
Lawrence PD	2.978	***	0.588		2.226	
DCSO	1.392	*	1.534		1.396	
Equipment violation	0.300	***	0.359	***	0.726	
Speeding violation	1.269	***	0.223	***	0.411	***
Other traffic violation	0.525	***	0.621	**	0.821	
Contraband found	0.932		24.444	***	306.180	***
City (1=Yes; 0=No)	1.207	**	1.461	*	0.870	
Arrest rate	1.654	***	1.969	***	1.047	
Constant	0.056	***	0.008	***	0.013	***
Model $\chi 2$	1952.5	***	847.2	***	3002.500	***
Nagelkerke R2	0.152		0.253		0.605	

N=18536, 1 = yes, 0 = no

**p<.05, **p<.01, ***p<.001*

Veil of Darkness Analyses

More recently, a growing number of studies have used the "veil of darkness" test to assess whether there is racial/ethnic bias in traffic stops. This hypothesis on which this analytical approach is based "asserts that police are less likely to know the race of a motorist before making a stop after dark than they are during daylight."[42] In order to test for racial profiling, previous studies have compared the distribution of stops by race/ethnicity between those made during the daylight to dark while restricting the sample to stops made during the intertwilight period (i.e., between roughly 5 and 9 pm).[43] According to Grogger and Ridgeway (2007), limiting the analysis to stops occurring during the intertwilight period and controlling for time of day, we can test for differences in the race distribution of traffic stops between night and day, which may equalize differences in risk arising due to differences in driving behavior and police exposure.

Previous studies have implemented the "veil of darkness" test with the full sample of traffic stop data and the intertwilight sample of traffic stop data. Using information on intertwilight collected from the U.S. Naval Observatory public database, we examine the percent of persons of color among drivers stopped using both the full and intertwilight sample. As shown in Table 5.3, 11.8 percent of drivers stopped were persons of color. Looking at the percentage of drivers during the daylight and darkness, 18.3 percent of drivers were persons of color of during the daylight hours and 23.7 percent of drivers were persons of color during dark hours. If we were to use the full sample to test for racial profiling, these two numbers do not show any evidence of racial profiling, because it shows that drivers of color are not disproportionately stopped during daylight when visibility is theoretically higher.

Table 5.3. Percent of Persons of Color Among Stopped Drivers, by Daylight

	Full Sample (n=19,765)	Intertwilight Sample (n=2,872)
Total	11.8%	10.7%
Daylight	18.3%	20.7%
Dark	23.7%	22.4%

[42] Grogger & Ridgeway, 2007, p. 878.
[43] By limiting the sample to the intertwilight period, this test implicitly controls for different traffic patterns, driving behavior, and exposure to law enforcement across racial and ethnic groups between daylight and darkness.

Whether this reflects police behavior or the effect of an important omitted variable, such as racial differences in travel patterns, cannot be said. By limiting the sample to intertwilight hours, the percentage of drivers stopped who are persons of color during this time frame is also at about 10.7 percent. Among drivers stopped during the daylight hours, 20.7 percent were persons of color; among drivers stopped when it was darker hours, 22.4 percent were persons of color. Restricting the sample to the intertwilight period reduces the contrast between day and night. However, this sample also provides little evidence of racial profiling.

Table 5.4 presents the results of the veil of darkness analysis conducted on the entire subset of stops that occurred during the intertwilight period. Subset analyses were also conducted for males only given the large representation of male drivers among those stopped in Douglas County. The results present evidence that is consistent with Table 5.3, which is that officers are stopping persons of color less frequently during daylight than during darkness. We did not find a statistically significant relationship between time of day or visibility and persons of color among the male subset, however. The estimate in the second row adjusts for clock time.[44] We did not find a statistically significant relationship between time of day or visibility and persons of color when adding time-of-day controls and the subset analyses conducted on males only also indicated no significant relationship between time of day or visibility and persons of color.

Table 5.4. Logistic Regression Analysis of the Racial Profiling Effect

Adjustments	Intertwilight Sample (n=2,872)	Intertwilight Sample – Males Only (n=1,711)
None	0.810*	0.808
Clock Time	0.864	0.861

Although there was no evidence that drivers who identified as persons of color or male drivers who identified as persons of color were disproportionately involved in traffic stops during daylight hours, it is important to consider other controls and subsets of the data that may help improve future analyses. For example, other studies have also included different controls for clock

[44] Time controls included a time bin and time bin quadratic. Time bins were included by dividing the intertwilight period into eight equal temporal groups. The roughly 3.5 hours of civil twilight range was decomposed into eight equal blocks. The earliest block was assigned one, the second block two, and so on. A time bin quadratic variable was created by taking the square of the time bin. We explored alternative methods used in previous research (e.g., 6 versus 8-time bins, 6-point linear time splines, cubic time splines), which made no difference to any of the key findings.

time, day of the week, location, and officer-level characteristics. For example, scholars have pointed out that the veil of darkness approach does not effectively analyze the behavior of individual officers. Additionally, the models assume that there is no seasonality in day–night risk differentials. Depending on the location, this assumption may be violated if there are significant seasonal changes based on high tourism, popular events, etc. To mitigate this risk, future analyses could focus on a subset of stops that occurred within the same season. Previous studies have also criticized the veil of darkness approach saying that the assumption that officers are not able to see drivers as well at night may not hold for certain areas where nighttime lighting may be more extensive, such as downtown areas, which may be well lit in the evening.

Post Stop Analysis of Traffic Stops

Due to the amount of discretion that an officer exercises once the stop has occurred, it is important to examine post-stop activity in addition to the general traffic stop patterns. While the decision to pull over a vehicle may not necessarily be linked to the driver's characteristics, post stop decisions often involve an officer talking to the driver and examining his/her driver's license and therefore being in a better position to assess the race and ethnicity of the driver. For example, an area of concern in post-stop activity is the decision to issue a citation versus a warning because most agencies allow officers almost total discretion in making this decision. This discretionary power may become a cause for concern, especially if disparities in stop outcomes are evident. The officer's decision to write a ticket as opposed to a verbal or written warning has serious implications for the driver. Financially, a cited driver faces the immediate effects of the fine attached to the offense, which can be quite large in some cases. The driver may also have to deal with increased insurance premiums. For multiple years.

Additionally, racial disparities in traffic stop dispositions may also be problematic because official records of police action might be interpreted as a reflection of trends in driving behavior. If people of color receive more citations because of their race or ethnicity rather than differences in driving behavior, these practices may create a record that could be used in subsequent decisions by future police officers and other governmental units.

To understand more completely the racial differences in the outcomes of traffic stops, we examine the decision to issue a citation in this section of the report by presenting the absolute

disparity and ratio between White people and people of color for each community. An absolute disparity simply measures the difference in outcome between the percent of persons of color who are issued a citation in comparison to the percent of White drivers who are issued a citation. For example, if 5.0% of drivers who are persons of color are cited and 2.0% of White drivers are cited the absolute difference is 3.0% (5.0% minus 2.0%). A ratio describes the degree of disparity between the percent of persons of color who are issued a citation and the percent White drivers who are issued a citation. Using the above example, if 5.0% of persons of color are cited and 2.0% of White drivers are cited the ratio is 2.5, meaning the odds of a person of color being cited are 2.5 times the odds of a White driver being cited.

To address the question of racial disparities in citation rates, we must examine those cases where a citation was issued. Table 5.5 presents the proportion of White and persons of color who were issued a citation during the study period. While Lawrence PD was less likely to issue a citation to persons of color than White drivers, Eudora PD and the Sheriff's Office were more likely to issue a citation to persons of color. Of individuals stopped by the Sheriff's Office, persons of color were 1.21 times more likely to receive a citation compared to White drivers while in Eudora persons of color were 1.76 times more likely to receive a citation compared to White drivers. On the other hand, Baldwin PD and KUPD issued citations to persons of color and White drivers at about the same rate.

Table 5.5. Disparities in Citations Issued

	Citations Issued to White Drivers	**Citations Issued to Persons of Color**	**Absolute Difference**	**Ratios**
Baldwin	10.8%	11.2%	0.4%	1.04
Eudora	14.2%	25.0%	10.8%	1.76
KUPD	21.2%	23.2%	2.0%	1.09
LKPD	29.5%	25.1%	-4.4%	0.85
Sheriff	15.8%	19.2%	3.4%	1.21
All Agencies	22.2%	23.0%	0.8%	1.03

While there are clear differences in outcomes of stop depending on the driver's race/ethnicity, it is important to examine what other factors could potentially influence these outcomes. With regards to citations, questions are frequently raised about the different types of offenses that are more likely to result in a driver being issued a citation versus a warning. For

example, common moving violations – such as speeding, traffic light violations, and stop-sign violations – are more likely to result in a citation being issued to the driver. Therefore, it is important to consider drivers who are stopped for the same offense or reason for which the stop was conducted.

Basis for Stop in Traffic Stops

Table 5.6 presents the basis for the stop for each of the five agencies involved in this study. The most common reasons for a traffic stop in Douglas County were for violations in speeding 10 miles per hour or more over the speed limit, equipment or inspection violations, and other traffic violations. As mentioned earlier, other traffic violations often involve failure to stop at a stop sign or failure to signal an upcoming turn. We next review each agency decision to issue a citation as opposed to a warning for each of these traffic violations.

Looking at drivers stopped for an equipment or inspection violation, the Sheriff Deputies were 2.5 times more likely to issue a citation to persons of color than to white drivers. This result should be viewed with much caution because it is based on a very small number of stops. On the other hand, there were little to no differences in the drivers who were stopped by Baldwin PD, KU PD, and Lawrence PD for an equipment or inspection violation. In contrast, Eudora PD was twice as likely to issue a citation to persons of color for speeding 10 mph or more over the speed limit in comparison to white drivers stopped for speeding 10 mph or more over the speed limit. There was little to no difference in race/ethnicity among drivers who were stopped and issued a citation for speeding by Baldwin PD and Lawrence PD. KU PD and the Sheriff's Office were 1.4 and 1.3 times more likely to issue a citation, respectively, for speeding. When we review stops for other traffic violations, we find that officers in all five agencies are more likely to issue a citation to White drivers compared to persons of color among stops for other traffic violations. Nevertheless, we urge caution when exploring these types of differences as they do not account for other factors such as time of day, seasonal differences, location, etc.

Table 5.6. Disparities in Citations Issued by Traffic Stop Violation

	White Drivers Issued a Citation			Persons of Color Issued a Citation			Absolute Difference			Ratios		
	Equipment or Inspection Violation	Speeding 10 mph or more	Other Traffic Violation	Equipment or Inspection Violation	Speeding 10 mph or more	Other Traffic Violation	Equipment or Inspection Violation	Speeding 10 mph or more	Other Traffic Violation	Equipment or Inspection Violation	Speeding 10 mph or more	Other Traffic Violation
Baldwin PD	5.0%	18.2%	10.6%	5.6%	16.2%	1.7%	0.6%	-2.0%	-8.9%	1.12	0.89	0.16
Eudora PD	4.3%	16.4%	14.9%	-	33.0%	2.4%	-4.3%	16.6%	-12.5%	-	2.01	0.16
KU PD	16.2%	20.1%	20.0%	15.1%	28.2%	5.0%	-1.0%	8.1%	-15.0%	0.94	1.41	0.25
Lawrence PD	8.1%	47.6%	21.0%	10.1%	46.3%	3.2%	2.0%	-1.3%	-17.8%	1.24	0.97	0.15
Sheriff	3.8%	18.4%	10.1%	9.5%	24.0%	3.1%	5.7%	5.6%	-7.0%	2.48	1.31	0.31
All Agencies	8.3%	27.4%	18.0%	10.5%	35.0%	3.5%	2.2%	7.6%	-14.5%	1.26	1.28	0.19

Discretionary Searches

Another area of concern in post-stop activity is whether racial disparities are evident in the decision to conduct a search. Numerous studies on police traffic stop activity suggest that people of color are significantly more likely to be searched once they are stopped than white drivers. Although there are several important factors that may explain these differences, disparate search rates, more than any other post-stop activity, are consistently identified in prior research on racial profiling and as a major issue for community members. For this reason, it is critical to differentiate between two types of searches, discretionary (consent, terry frisk, and probable cause) and non-discretionary (incident to arrest, towed vehicle) searches. This dichotomy serves as a way of differentiating between searches occurring pursuant to policy (when bias would not be expected) and searches occurring pursuant to an exercise of officer's discretion (when more bias might be expected). Nevertheless, there are limitations in how discretionary searches are examined. As discussed in Chapter IV, the Douglas County stop data collection form did not include a category to describe the type of probable cause (e.g., plain view, smell). Therefore, it is unclear whether a search was conducted based on lower versus higher levels of discretion given the scope of the decision to conduct the traffic stop.

Table 5.7. Disparities in Discretionary Searches Conducted

	Discretionary Searches of White Drivers	Discretionary Searches of Persons of Color	Absolute Difference	Ratios
Baldwin	2.9%	2.0%	-0.9%	0.70
Eudora	1.3%	2.3%	1.0%	1.76
KUPD	1.7%	2.0%	0.3%	1.20
LKPD	3.6%	6.5%	2.9%	1.82
Sheriff	1.6%	4.3%	2.8%	2.77
All Agencies	2.5%	5.1%	2.6%	2.05

Table 5.7 reports the disparate ratios in discretionary searches conducted by agency. Based on all traffic stops conducted in Douglas County, law enforcement agencies were twice as likely to conduct a discretionary search on a person of color than a White driver. Looking closer at the stop activity reported by individual agencies, the Sheriff's Office was 2.8 times more likely to conduct a discretionary search on a person of color than a white driver. Eudora PD and Lawrence PD were 1.8 times more likely to conduct a discretionary search on a person of color than a White

driver. On the other hand, Baldwin PD was more likely to conduct a discretionary search on a White driver than a person of color following a traffic stop and there was little difference in the race/ethnicity in discretionary searches conducted by KU PD (1.2).

Table 5.8. Disparities in Evidence Found in Discretionary Searches

	No Evidence Found in Searches of White Drivers	No Evidence Found in Searches of Persons of Color	Absolute Difference	Ratios
LKPD	25.3%	28.2%	2.9%	1.12
Sheriff	30.0%	38.9%	8.9%	1.30
All Agencies	26.4%	29.9%	3.5%	1.13

Turning to the discretionary searches that resulted in no evidence found, there was a small difference in the race/ethnicity of drivers searched without any contraband found in traffic stops conducted across Douglas County (see Table 5.8). Yet, while there is also little difference in the race/ethnicity of drivers searched without any contraband found following traffic stops conducted by Lawrence PD, discretionary searches conducted by the Sheriff's Office were 1.3 times more likely to turn up with no evidence when conducted on persons of color than White drivers. We did not include Baldwin PD, Eudora PD, or KU PD in this analysis due to the small number of searches conducted. However, it is important to monitor this information as searches can significantly erode trust between the community and their police department.

VI. Discussion

Using data on traffic stops in Douglas County that took place from January 1, 2020 to December 31, 2021, we applied several analytical methods to determine whether there is any evidence of racial disparities and found mixed results (see table 6.1). It should be noted that these methods are not all dealing with the same cases; therefore, an exact comparison between any of them cannot be made. It is possible, however, to draw tentative conclusions based on the findings from each of these analytical approaches.

Summary of Findings

First, findings from the benchmark analysis using an adjusted Census population indicated that Black drivers, who are residents of Douglas County, were stopped 2.73 times more than would have been expected given the makeup of the Black driving population in Douglas County. Second, multivariate regression models predicting three different outcomes of stops (citation, arrest, or search) revealed that persons of color were 1.59 times more likely than White drivers to experience a discretionary search following a traffic stop while controlling for other variables. On the other hand, the odds of persons of color being cited or arrested following a traffic stop were not significant after controlling for other variables in the analyses. Third, the veil of darkness test found no relationship between available lighting and persons of color stopped and therefore, provided no evidence of racial profiling. Finally, the post stop analyses indicated that some areas of concern. For example, there was little to no difference between persons of color and White drivers in traffic stops that received a citation, but a closer examination into the basis for stop revealed larger disparities. Specifically, persons of color pulled over for an equipment/inspection violation or for speeding 10 mph over the speed limit were 1.3 times more likely to receive a citation for these violations in comparison to White drivers. On the other hand, persons of color pulled over for other traffic violations, such as failing to stop at stop sign or violating traffic control devices, were less likely to receive a citation than White drivers. Persons of color were also twice as likely to be searched (following consent, probable cause, or terry frisk), but there was a small and insignificant difference between persons of color and White drivers, who were searched and found with no contraband.

Table 5.9. Summary of Findings by Type of Analysis

Analytical Approach	Evidence of Racial Profiling	All Douglas County	Baldwin PD	Eudora PD	KU PD	Lawrence PD	Sheriff
Adjusted Census Population	Yes (Black Residents Only)	X					
Multivariate Analyses							
Citations	No						
Arrests	No						
Searches	Yes	X					
Veil of Darkness	No						
Post Stop Analyses							
Citations	Yes			X			X
Equipment Violations	Yes					X	X
Speeding (more than 10 mph)	Yes			X	X		X
Other Traffic Violations	No						
Searches				X	X	X	X
No Evidence Found	Yes						X

Local Law Enforcement Policy and Practice Changes

Although the analyses did not find widespread racial profiling by law enforcement officers in Douglas County, they did identify some racial and ethnic disparities that call for further investigation. Throughout the study period, Douglas County law enforcement agencies were given monthly summaries of their individual stop data to inform them about the progress of the data collection and address any issues with the quantity and/or quality of data. In addition, the agencies were provided a detailed analysis on disparities and followed by a meeting with the research team to review these disparities. As a result, several the agencies in Douglas County initiated a series of policy changes before the end of the study period to address disparities uncovered in the analysis. Some of these policy changes are discussed below.

Baldwin Police Department

Based on preliminary findings from monthly reports on racial disparities in traffic stops, Baldwin Police Department began having department wide discussions about traffic stops and the reasons for officers'-initiated searches. While Baldwin PD conducts less than 5 percent of all traffic stops reported in Douglas County due to the size of their population and jurisdiction, Baldwin PD has taken a proactive approach to address any racial disparities. The traffic stop data is currently being shared throughout the department and regularly included in the discussions

between supervisors and officers to bring awareness and understanding to the concerns of community members. Baldwin PD has recently changed their in-car and body camera system to a more robust system, allowing supervisors to review all car stops and other recorded events more readily. This new system also permits for regular monitoring of traffic stop practices by the supervisors. As the data collection continues, Baldwin PD has expressed their plans to continue examining any instances of disparities in their stop activity.

Eudora Police Department

During the study period, Eudora police officers begin to meet with their supervisors every 4 months to review a random selection of their traffic stops to discuss any concerns with traffic policies, practices, and/or procedures as well as officer safety concerns. In addition, the officer and supervisor also review in-car video and body worn camera footage on the stops to ensure compliance with agency-level policies, practices, and training. The Chief has noted that the reviews would include findings on the officer's traffic and pedestrian stop activity from the analyses conducted by the CJCC.

Douglas County Sheriff Office

The Douglas County Sheriff's Office (DCSO) began reviewing body worn camera footage on all searches involving persons of color during the study period to ensure compliance with agency policies and practices. In addition to these reviews, which were conducted by DCSO command staff, the DCSO also offered members of the CJCC and other residents with an opportunity to review body worn camera footage on stops and/or searches that took place. The DCSO has agreed to continue to review officer-level information on disparities to ensure compliance with policies and/or practices on pedestrian and traffic stops.

University of Kansas Police Department

On September 3, 2020, the Chancellor's Office at the University of Kansas put together a Task Force on Community-Responsive Public Safety to review the public safety policies, practices, and procedures. The task force, which included faculty, staff, and student members, issued a series of recommendations including efforts to continue collecting data on traffic and

pedestrian stops. The task force also included recommendations for the police department to publicly report a summary of the data and integrate the data into their supervisory oversight to reduce any racial disparities. The University of Kansas Police Department (KUPD) has been tasked with following these recommendations as suggested in the November 2020 report by the Chancellor's Office.[45]

Lawrence Police Department

The Lawrence Police Department has developed an Early Identification System, which is used to monitor a set of indicators (e.g., citizen complaints against officers, disciplinary actions, etc.) that may identify officers who need additional training or some other types of support, for members of the Lawrence PD. In addition of the EI system, Lawrence PD will continue to monitor data on stops and investigate any disparities in traffic enforcement that have been uncovered through analyses presented in this report. Additionally, the Lawrence PD is requiring officers to participate in a Fair and Impartial Policing (FIP) training by Dr Lorie Fridell. This nationally acclaimed training will be offered to Lawrence community members in a seminar format so that they are aware of the training being offered to their officers.

[45] For more information on the final report by the KU Task Force on Community-Responsive Public Safety, visit the Chancellor Office's website: https://chancellor.ku.edu/task-force-community-responsive-public-safety.

VII. Recommendations

Based on findings from the current study examining traffic stop data in Douglas County from January 1, 2021 to December 31, 2022, below are four key recommendations to help reduce existing racial disparities in Douglas County:

Recommendation #1

Douglas County law enforcement agencies should continue to collect data on all stops to identify if disparities persist (as indicated in the current study) or develop.

Additionally, Douglas County law enforcement agencies, in conjunction with the Douglas County CJCC, should review the data elements currently being collected to determine if any data elements should be added or revised. For example, agencies may consider adding an element to capture the individual's town of residence (e.g., Baldwin City resident), revising the category for speeding 10 mph over the speed limit (e.g., speeding 10-15 mph, speeding more than 15 mph), adding information on reason for search (e.g., plain view, smell), and adding another variable to capture the type of drug found (e.g., marijuana). These additional data elements and revisions to the data collection form may help to better understand the level of disparities in stops of persons of color given concerns highlighted in the current study in the disparities found in different outcomes of stops.

Recommendation #2

Douglas County law enforcement agencies should continue to examine and discuss findings from the stop data analyses bi-annually or annually with the help and support of the Douglas County CJCC. These findings should be discussed with their officers, the CJCC, and community members.

Additionally, Douglas County law enforcement agencies should investigate areas where disparities are identified by examining other stop-level characteristics (e.g., location), officer-level characteristics (e.g., years of service), and collecting additional information from police reports and body worn camera footage on the stop. Given the concentration of traffic enforcement activity

among a small proportion of officers, agencies should identify whether disparities are associated to the individual or agency to understand if additional training is needed or other corrective actions should be taken.

Recommendation #3

Douglas County law enforcement agencies should review the basis for the stops to ensure that officers are following the agency's policies and any future changes to policing policies. Based on the findings reported earlier, other law enforcement agencies across the country have also reported significant racial disparities in stops made following a minor traffic violation, such as a broken headlight. Due to its impact on police-community relations, other policymakers are re-considering whether minor traffic violations effectively reduce public safety.[46] Douglas County law enforcement agencies should also consider whether such minor traffic violations necessarily reduce public safety and discuss any concerns with community members.

Additionally, Douglas County law enforcement agencies should consider exploring a program such as "Lights On!," which is currently being employed by more than 120 law enforcement agencies, to help pay for any necessary vehicle repairs by providing a voucher to drivers following a traffic stop for an equipment violation.[47] Such programs help to reduce the impact on community members and improve police-community relations.

Recommendation #4

Douglas County law enforcement agencies, with help and support of the Douglas County CJCC, should publish findings from the stop data collection and analyses in an online data dashboard and a comprehensive report. This data collection and analyses should be reviewed carefully with the CJCC for accuracy and the comprehensive report should be discussed with local community members and groups to address any concerns with racial profiling. Law enforcement agencies should set up a process to examine and discuss the data and ongoing analysis with the community bi-annually or annually to maintain and open dialogue with residents of each community.

[46] Hodge & Johnson, 2020
[47] For more information on "Lights On!," visit the program's website: https://www.lightsonus.org/.

VIII. References

Alpert, G. P., Dunham, R. G., & Smith, M. R. (2007). Investigating racial profiling by the Miami-Dade Police Department: A multimethod approach. *Criminology & public policy*, *6*(1), 25-55.

Alpert, G. P., Smith, M. R., & Dunham, R. G. (2004). Toward a Better Benchmark: Assessing the Utility of Not-at-Fault Traffic Crash Data in Racial Profiling Research. *Justice Research and Policy*, *6*(1), 43–69. https://doi.org/10.3818/JRP.6.1.2004.43

Baker University. (2022). Office of Institutional Research. *Baker University*. Retrieved September 16, 2022 from https://www.bakeru.edu/office-of-institutional-research/.

Baldwin City. (2022). Baldwin City Kansas. Retrieved September 16, 2022 from https://www.baldwincity.org/.

Barnum, C., & Perfetti, R. L. (2010). Race-sensitive choices by police officers in traffic stop encounters. *Police Quarterly*, *13*(2), 180-208.

Bellware, K. (2021). Minneapolis police to curb minor traffic stops, long cited by critics as racial profiling. *The Washington Post*. Retrieved September 16, 2022 from https://www.washingtonpost.com/nation/2021/08/13/minneapolis-police-traffic-stops/.

City of Lawrence Kansas. (2022). Neighborhood Traffic Management Program. *Lawerenceks.org.* https://lawrenceks.org/mso/safer-speeds/

Conde, X. (2021). With hard-won support of Philly's top cop, bill to ban minor traffic stops moves ahead. WHYY. Retrieved September 16, 2022 from https://whyy.org/articles/with-hard-won-support-of-phillys-top-cop-bill-to-ban-minor-traffic-stops-moves-ahead.

Davis, E., Whyde, A., & Langton, L. (2018). Contacts between police and the public, 2015. *US Department of Justice Office of Justice Programs Bureau of Justice Statistics Special Report*, 1-33.

Defender Association of Philadelphia. (2022). Police Accountability Unit. *Defender Association of Philadelphia*. Retrieved September 16, 2022 from https://phillydefenders.org/practice-units/police-accountability/#driving-equality.

Douglas County. (2020). Douglas County information about services, response to coronavirus. Douglas County Kansas. Retrieved September 16, 2022 from https://www.douglascountyks.org/depts/administration/county-news/2020/03/22/douglas-county-information-about-services-response.

Doyle, L., & Nembhard, S. (2021, April 26). Police traffic stops have little to do with public safety. *Urban Institute*. Retrieved August 30, 2022, from https://www.urban.org/urban-wire/police-traffic-stops-have-little-do-public-safety.

Engel, R. S., Calnon, J. M., & Bernard, T. J. (2002). Theory and racial profiling: Shortcomings and future directions in research. *Justice Quarterly*, *19*(2), 249-273.

Engel, R. S. & Johnson, R. (2006). Toward a Better Understanding of Racial and Ethnic Disparities in Search and Seizure Rates. Journal of Criminal Justice, 34(6), 605-617.

Eudora City. (2022). Our Community. Eudora, Kansas. Retrieved September 16, 2022 from https://www.cityofeudoraks.gov/211/Our-Community.

Fridell, L. (2004). *By the numbers: A guide for analyzing race data from vehicle stops*. Washington, D.C.: Police Executive Research Forum.

Grogger, J., & Ridgeway, G. (2006). Testing for racial profiling in traffic stops from behind a veil of darkness. *Journal of the American Statistical Association*, *101*(475), 878-887.

Harrell, E., & Davis, E. (2020). Contacts between police and the public, 2018–statistical tables. *Bureau of Justice Statics Report, NCJ*, *255730*.

Harris, D. (2020). Racial Profiling: Past, Present, and Future. *American Bar Association.* https://www.americanbar.org/groups/criminal_justice/publications/criminal-justice-magazine/2020/winter/racial-profiling-past-present-and-future/

Haskell Indian Nations University. (2022). Haskell Enrollment Data. Haskell Indian Nations University. Retrieved September 16, 2022 from https://www.haskell.edu/registrar/enrollment-data/.

Hodge, J., & Johnson, A. (2020). Ending Pretextual Stops is an Important Step Toward Racial Justice. *Vera Institute of Justice Inc.* https://www.vera.org/blog/ending-pretextual-stops-is-an-important-step-toward-racial-justice

International Association of Chiefs of Police. (2018). Policing in Small, Rural, and Tribal Communities. International Association of Chiefs of Police. Retrieved September 16, 2022 from https://www.theiacp.org/sites/default/files/2018-11/IACP_PMP_SmallTribal.pdf.

McDevitt, J. & Iwama, J. (2016). An Examination of Vermont State Police Traffic Stops Data: Final Report. Retrieved September 16, 2022 from https://vsp.vermont.gov/sites/vsp/files/documents/VSPPresentation05242016.pdf.

Kansas Attorney General. (2017). Racial and Bias-Based Policing. Retrieved September 16, 2022 from https://ag.ks.gov/public-safety/racial-and-bias-based-policing.

Kansas Department of Transportation. (2006). KDOT: Kansas Interstate Routes. *Kansas Department of Transportation.* https://www.ksdot.org/interstate50th/KsStory_IhistoryKIR.asp.

Langton, L., & Durose, M. R. (2013). *Police behavior during traffic and street stops, 2011*. Washington, DC: US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Lawrence City. (2022). About the City. Lawrence City. Retrieved September 16, 2022 from https://lawrenceks.org/about/.

Makofske, M. (2020). Pretextual Traffic Stops and Racial Disparities in their Use. *Munich Personal RePEc Archive.* https://mpra.ub.uni-muenchen.de/102435/

Mazerolle, L., Antrobus, E., Bennett, S., & Tyler, T. R. (2013). Shaping Citizen Perceptions of Police Legitimacy: A Randomized Field Trial of Procedural Justice: Shaping Citizen Perceptions of Police. *Criminology*, *51*(1), 33–63. https://doi.org/10.1111/j.1745-9125.2012.00289.x

McDevitt, J. & Iwama, J. (2016). Vermont State Police: Examination of Traffic Stops Final Report. http://vsp.vermont.gov/sites/vsp/files/documents/VSPPresentation05242016.pdf.

Mercer, M. (2020). Police 'Pretext' Traffic Stops Need to End, Some Lawmakers Say. *The Pew Charitable Trusts.* https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2020/09/03/police-preText-traffic-stops-need-to-end-some-lawmakers-say.

Murphy, K., Hinds, L., & Fleming, J. (2008). Encouraging public cooperation and support for police. *Policing and Society*, *18*(2), 136–155. https://doi.org/10.1080/10439460802008660

Nadal, K. L., Davidoff, K. C., Allicock, N., Serpe, C. R., & Erazo, T. (2017). Perceptions of Police, Racial Profiling, and Psychological Outcomes: A Mixed Methodological Study: Perceptions of Police and Racial Profiling. *Journal of Social Issues*, *73*(4), 808–830.

Novak, K. J. (2004). Disparity and racial profiling in traffic enforcement. *Police quarterly*, *7*(1), 65-96.

Ramirez, D., McDevitt, J., & Farrell, A. (2000). *A resource guide on racial profiling data collection systems: Promising practices and lessons learned*. US Department of Justice.

Roh, S., & Robinson, M. (2009). A geographic approach to racial profiling: The microanalysis and macroanalysis of racial disparity in traffic stops. *Police Quarterly*, *12*(2), 137-169.

Salter, J. (2021). Fewer 2020 traffic stops in Missouri, but disparity remains. *The Associated Press*. Retrieved September 16, 2022 from https://apnews.com/article/michael-brown-race-and-ethnicity-health-coronavirus-pandemic-3140527e26103eee8c6495f48acb1127.

Schafer, J. A., Carter, D. L., Katz-Bannister, A. J., & Wells, W. M. (2006). Decision making in traffic stop encounters: A multivariate analysis of police behavior. *Police Quarterly*, *9*(2), 184-209.

Shackelford-Nwanganga, B. (2022). Pandemic-weary Haskell students feel 'in the dark' on university's decision to stay remote. Kansas City Public Radio. Retrieved September 16, 2022 from https://www.kcur.org/2022-02-07/pandemic-weary-haskell-students-feel-in-the-dark-on-universitys-decision-to-stay-remote.

Smith, M. R., & Petrocelli, M. (2001). Racial profiling? A multivariate analysis of police traffic stop data. *Police Quarterly*, *4*(1), 4-27.

Smith, M. R. & Tillyer, R., Lloyd, C., & Petrocelli, M. (2021). Benchmarking Disparities in Police Stops: A Comparative Application of 2nd and 3rd Generation Techniques. *Justice Quarterly*, 38(3): 513-536.

Sunshine, J., & Tyler, T. R. (2003). The Role of Procedural Justice and Legitimacy in Shaping Public Support for Policing. *Law Society Review*, *37*(3), 513–548. https://doi.org/10.1111/1540-5893.3703002

Tillyer, R., & Klahm IV, C. (2011). Searching for contraband: Assessing the use of discretion by police officers. *Police Quarterly*, *14*(2), 166-185.

Tyler, T. R., & Huo, Y. J. (2002). *Trust in the law: Encouraging public cooperation with the police and courts*. Russell Sage Foundation.

Tyler, T., & Jackson, J. (2013). Future challenges in the study of legitimacy and criminal justice. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2141322

University of Kansas. (2021). Fall Enrollment Demographic Comparisons. *KU Fact Book Enrollment Comparisons.* https://aire.ku.edu/enrollment-comparisons

United States Census Bureau. (2022). 2010 American Community Survey 5-Year Estimate. Washington, D.C.: United States Census Bureau. Retrieved September 16, 2022 from https://data.census.gov/cedsci/.

United States Census Bureau. (2022). 2020 American Community Survey 5-Year Estimate. Washington, D.C.: United States Census Bureau. Retrieved September 16, 2022 from https://data.census.gov/cedsci/.

University of Kansas. (2022). *Protect KU for the Greater Good*. Lawrence, Kansas: University of Kansas. Retrieved September 16, 2022 from https://protect.ku.edu/.

Welsh, M., Chanin, J., & Henry, S. (2021). Complex colorblindness in police processes and practices. *Social Problems*, *68*(2), 374–392.

Withrow, B.L., Dailey, J.D., & Jackson, H. (2008). The Utility of an Internal Benchmarking Strategy in Racial Profiling Surveillance. *Justice Research and Policy*, 10(2): 19-47.

Appendix A: Stop Data Collection Form

Douglas County Stop Data Collection Form **Rev. July 9, 2020**

Date:	**Time:**	**Officer ID:**
Agency:	**Area:**	**Call No.:**
Location:		
DOB of Subject:		

Ethnicity of Subject: ○ Hispanic/Latinx ○ Non-Hispanic/Latinx

Race of Subject: ○ White ○ American Indian ○ East Indian ○ Black ○ Asian/Pacific Islander ○ Middle Eastern

Gender of Subject: ○ Male ○ Female ○ Trans/Transgender

Residency of Subject: ○ Douglas County ○ Other Kansas County ○ Out-of-State ○ International

Vehicle Registration: ○ Douglas County ○ Other Kansas County ○ Out-of-State

Reason for Stop: ○ Ped Check/Terry Stop ○ Traffic Stop ○ Traffic Accident

Basis for Stop:

- ○ APB/BOLO
- ○ Call for Service
- ○ Equipment/Inspection Violation
- ○ Motorist Assist/Courtesy
- ○ Registration Violation
- ○ Speeding – less than 10mph
- ○ Speeding – 10mph or greater
- ○ Special Detail/Directed Patrol
- ○ State Statute Violation
- ○ Suspicious Person
- ○ Warrant
- ○ Violation of City/Town Ordinance
- ○ Other Traffic Violation (please specify): _____

Outcome of Stop:

- ○ Citation
- ○ Verbal Warning
- ○ Written Warning
- ○ Arrest Driver/Subject
- ○ Arrest Passenger
- ○ Arrest following a warrant
- ○ Mental Detention
- ○ NTA
- ○ No Action

Duration of Stop: ○ 0-15 min. ○ 16-30 min. ○ Over 30 min.

Search/Frisk Conducted: ○ Yes ○ No

Scope of Search/Frisk: ○ Driver ○ Passenger(s) ○ Vehicle ○ Pedestrian

Search/Frisk Conducted as a Result of: ○ Consent ○ Search Incident to Arrest ○ Inventory/Tow ○ Probable Cause ○ Terry Stop

Evidence Found in Search/Frisk: ○ None ○ Alcohol ○ Drugs/Drug Paraphernalia ○ Firearm ○ Money ○ Other ○ Weapon other than firearm

If firearm is/are found in search/frisk: ○ Illegal firearm ○ Legal firearm

Appendix B: Traffic Accidents

As noted in Section IV, researchers have used traffic accident data, also referred to as crash data, to approximate the driving population. Scholars assert that drivers that are not-at-fault in two-vehicle crashes do not choose to be in an accident and are hence victimized at random.[48] As such, two-vehicle traffic accidents provide researchers with a random selection of the driving population. The benefits of using accident data outweigh potential disadvantages. Since many police departments already collect traffic accident data, this benchmark provides a more cost-effective option for researchers.[49] Additionally, accident data accounts for populations that may live in an area but do not drive in it, along with populations that don't live in an area but do drive through it. Fridell and colleagues (2004) touch on the alternative hypothesis that disparate policing may be indicative of legitimate policing practices. An example would be higher patrolling in high-crime areas (hot spots policing). To combat this, accident data can be disaggregated to look at different geographic levels (cities, neighborhoods, and/or police beats) and different local contexts (e.g., urban).[50] When comparing accident data to census data in Miami-Dade, Florida, for example, Alpert and colleagues (2004) found that their proportions were comparable, even across racially homogenous and heterogeneous neighborhoods. As a result, numerous other studies examining racial disparities in traffic stops have used accident data as a benchmark.[51] However, a notable disadvantage of using accident data is that it is not always clear who is at-fault in an accident and the race(s) of the drivers are not always recorded across police departments.[52]

Due to the limited number of agencies collecting traffic accident data, the lack of stop information on the traffic accidents, and decline in the total number of traffic accidents during the COVID-19 pandemic, we were unable to use the data as a benchmark in the current study. Nevertheless, below are the percentage of drivers involved in traffic accidents across race and ethnicity based on traffic accident data collected by the Lawrence Police Department (2,142 accidents) and the University of Kansas (47 traffic accidents) (see Table B.1). Much like the

[48] Alpert et al., 2004
[49] Withrow, 2008
[50] Ibid.
[51] McDevitt & Iwama, 2016; Smith et al., 2021; Withrow, 2008
[52] Smith et al., 2019

Lawrence residential population, non-White drivers were predominantly represented in traffic accidents (75 percent). Non-Hispanic Black/African Americans comprised 9 percent of persons involved in a traffic accident and non-Hispanic Whites comprised only 76.9 percent of persons involved in a traffic accident. Additionally, Hispanic/Latinx drivers comprised 6 percent of persons involved in a traffic accident. Although accident data is a useful benchmark for assessing racial profiling, the data collected was not ideal for the current study.

Table B.1. Traffic Accident Data Reported by Lawrence PD and KUPD, 2020- 2021

Race/Ethnicity	**Percentage**
American Indian	1.60%
Asian or Pacific Islander	3.40%
Hispanic/Latinx	5.90%
Multiple Races	0.70%
Non-Hispanic Black/African American	9%
Non-Hispanic White	76.90%
Total	**2,189**