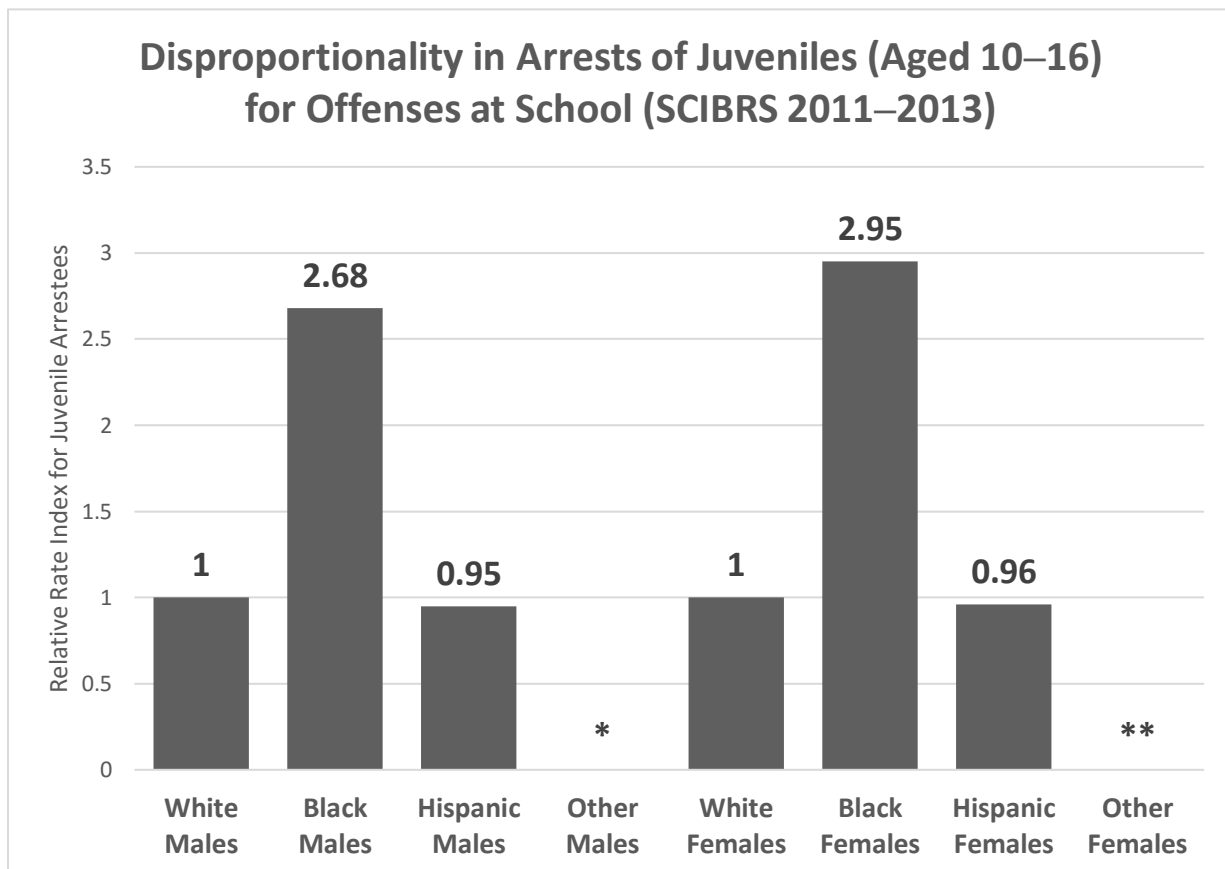


Statistics for Years 2011–2013 Regarding Disproportionality and Disproportionate Minority Contact (DMC) in South Carolina Juvenile Arrests for Offenses at School Using Data from the South Carolina Incident-Based Reporting System (SCIBRS)



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The author thanks the SCIBRS manager—Alexandra Perez-Caballero—for patiently and enthusiastically sharing her comprehensive knowledge of the SCIBRS data. Without her, this report would have been impossible. Yet, because of her wry approach and unmatched talent for ‘finding the edges’, it became a challenging puzzle to complete together. The author is fortunate to call Alex a colleague and a friend.

Abstract.

This report examines disproportionality in youth arrests in 2011–2013 for offenses at school using data from the South Carolina Incident-Based Reporting System (SCIBRS). It proceeds by developing an intuitive understanding of disproportionality, which is that it occurs when any particular group undergoes a quantifiable experience (e.g., numbers of arrest) that it is not commensurate with its percentage of the population. In practice, the concern is for detecting when “minority” groups experience disproportionality; the term *disproportionate minority contact* (or more simply, disproportionate contact) is introduced.

Disproportionality is of especial concern when it is greater, rather than lesser. The concept of relative rate index (RRI) is presented as a measure of the magnitude of disproportionality. So that the effects of chance on the data are minimized, the author has chosen the (albeit, arbitrary) level of $RRI > 1.4$ as the minimum disproportionate RRI to report for the analyses included here. Eight groups are included in the disproportionality analysis—with white males serving as the reference group for males and white females serving as the reference group for females. RRI is understood to be “that many times the rate of the reference group.” In this way, an examined group having the minimum RRI can be understood as that group having 1.4 times the rate of an experience for the reference group.

Next, the report provides descriptive statistics about the arrestee population, such as distribution by age, arrest offense, sex, race, and ethnicity, before proceeding to analyses of disproportionality for arrestees using sex, race, ethnicity, arrest offenses, arrest type, disposition, drugs, and weapons. Analyses for arrest type and disposition did not uncover disproportionality. However, for the other variables, black males and black females were consistently the only groups of those analyzed that exhibited disproportionality; in other words, for arrests of South Carolina youth aged 10–16 for school offenses in 2011–2013, disproportionality was a problem for black youth—both male and female.

The statistics included in this report support the following statements about the 10–16 age group of arrestees:

- Arrests
 - Black males were arrested at 2.68 times the rate of white males.
 - Black females were arrested at 2.95 times the rate of white females.
- Arrest offenses
 - Black males were arrested at greater rates than white males for nine offenses. For example, black males were arrested at 6.1 times the rate of white males for larceny/theft offenses.
 - Black females were arrested at greater rates than white females for six offenses. For example, black females were arrested at 4.2 times the rate of white females for simple assault.
- Drugs
 - Black males were found with marijuana at 1.9 times the rate of white males.
- Weapons
 - Black males were discovered with firearms at 5.8 times the rate of white males and with a club, blackjack, or brass knuckles at 1.7 times the rate of white males.
 - Black females were discovered with a lethal cutting instrument at twice the rate of white females.

Table of Contents.

Abstract.....	2
What is disproportionate minority contact?	4
The relative rate index (RRI): or, “that many times the rate of the reference group.”	4
<i>Toy Example 1: Bar Charts Showing Disproportionate Arrests.</i>	4
<i>Toy Example 2: Bar Charts Showing Proportionate Arrests.</i>	5
Disproportionate (minority?) contact ... and more details about the RRI.	5
The meaning of RRI symbols, reviewed.....	6
A case of disproportionate contact? South Carolina youth arrests for offenses at school using the South Carolina Incident-Based Reporting System (SCIBRS) Data 2011–2013.	7
Investigating disproportionate contact using SCIBRS data and population data.....	7
Racial-ethnic groups by sex (including RRI reference groups).	8
Learning more about the youth arrestees.	9
<i>Distribution of 8,991 Arrestees by Age.</i>	9
<i>Distribution of Arrestees by Arrest Offense.</i>	10
Demographic comparison: population of South Carolina youth aged 7–17 from 2011–2013 vs. arrestees aged 7–17 from 2011–2013.....	11
<i>Pie Charts of Sex Percentage in Population (Aged 7–17) and Arrestees (Aged 7–17).</i>	11
<i>Pie Charts of Racial–Ethnic Percentage in Population (Aged 7–17) and Arrestees (Aged 7–17).</i>	12
Yes, a case of disproportionate contact. Now, how much and in what?	12
<i>Bar Chart of Arrest RRIs for Juveniles Aged 10–16.</i>	12
<i>Bar Chart of All Groups of Arrestees Aged 10–16 That Had Arrest RRIs > 1.4.</i>	13
Other considerations: not all contact is clearly disproportionate.	14
<i>Bar Chart of Arrest Type Percentage for Arrestees Aged 10–16.</i>	14
<i>Bar Chart of Disposition Percentage for Arrestees Aged 10–16.</i>	15
Is there other disproportionality in the arrest data? Yes.	15
<i>Pie of Pie Chart for Drug Type Percentage Discovered on 8,991 Arrestees Aged 7–17.</i>	15
<i>Bar Chart of All Groups of Arrestees Aged 10–16 That Had Marijuana RRIs > 1.4.</i>	16
<i>Pie of Pie Chart for Weapons Percentage Discovered on 8,991 Arrestees Aged 7–17.</i>	16
<i>Bar Chart of All Groups of Arrestees Aged 10–16 with Weapon RRI > 1.4.</i>	17
Remarks about data limitations.	17
Appendix A: Counts of and RRIs for arrests of juveniles (aged 10–16) for offenses at school (SCIBRS 2011–2013).	20
Appendix B: Descriptions for arrest, disposition, and offense.....	21

What is disproportionate minority contact?

Consider a toy example about a fictional community consisting of only 100 people: 67 white males and 33 black males. Imagine a particular year in which there are 40 arrests: 20 white males are arrested and 20 black males are arrested.

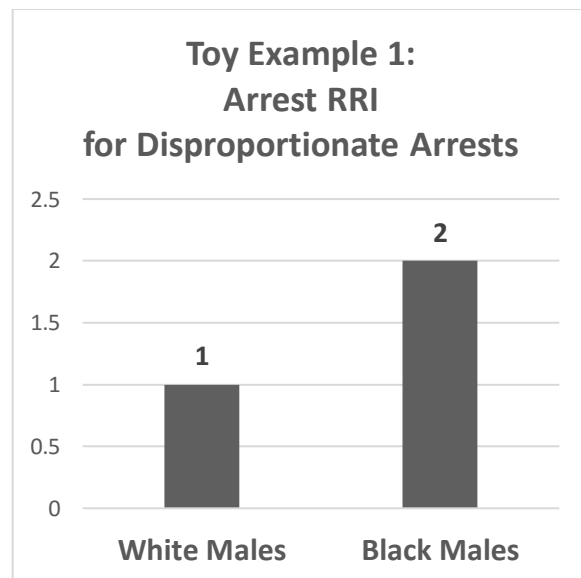
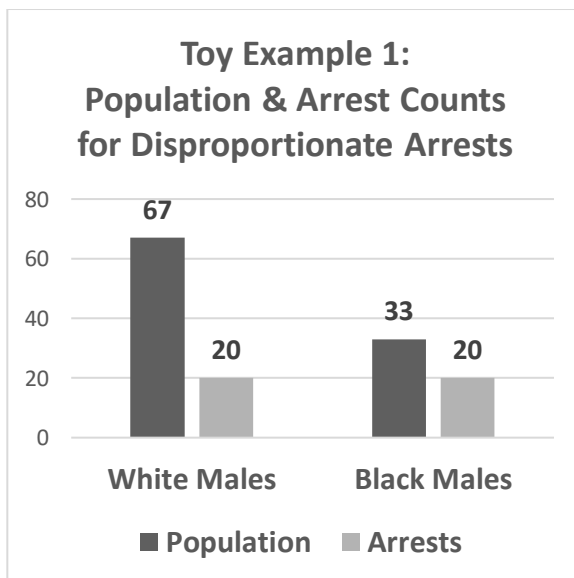
At first glance, the two groups seem to be experiencing arrests equally: each group has 20 arrestees for the particular year. In other words, the count of arrests is the same. Recall, though, that the two different groups are not represented equally in the population: there are half as many black males as there are white males. Black males are in the minority.

Even though there is an equal number of 20 arrestees for each group, black males are actually being arrested at twice the rate of white males because there are half as many black males in the population. This example is one of *disproportionate minority contact (DMC)*, because the arrests for a particular group are not commensurate with that group's proportion of the population. Unless all groups are represented equally in the population, raw counts of arrests are not sufficient for determining the magnitude of DMC; population levels must be incorporated in the analysis.

The *relative rate index (RRI)*: or, "that many times the rate of the reference group."

One method of incorporating population proportions is called the *relative rate index (RRI)*. The RRI chooses a *reference group* to have RRI = 1. This reference group serves as the benchmark for all other groups. The RRI value for all other groups can be understood as "that many times the rate of the reference group."

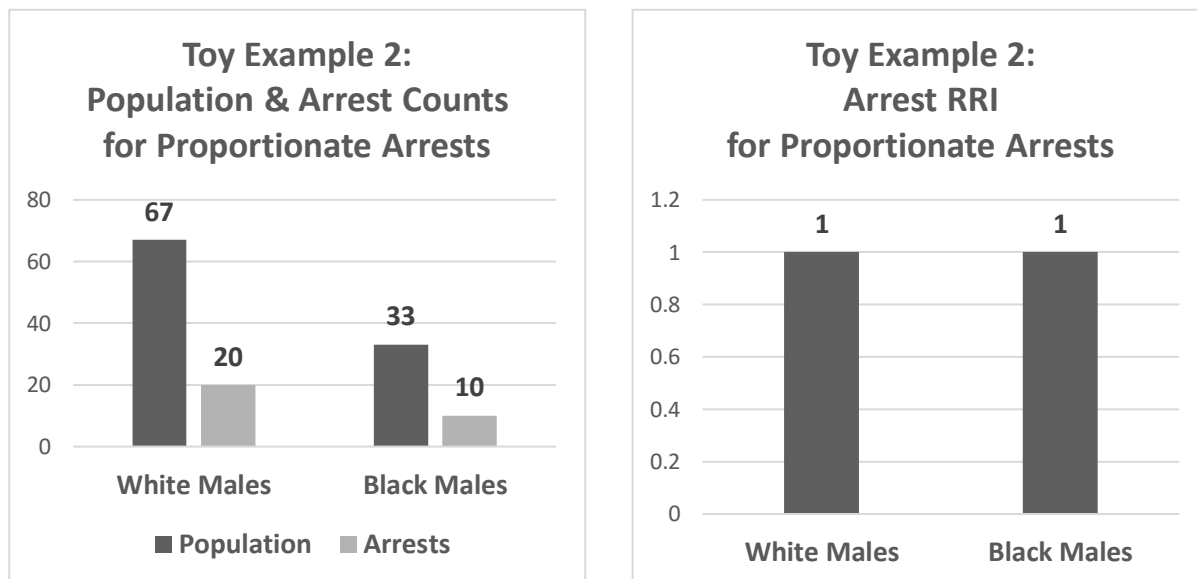
Look at the figures below, which illustrate the toy example. On the left, the counts of arrestees are the same. The figure on the right takes into account population proportions for the different groups. The arrest RRI clearly conveys DMC: black males have an arrest RRI of 2; i.e., black males are arrested at twice the rate of white males.



Toy Example 1: Bar Charts Showing Disproportionate Arrests.

Consider another toy example. The community is the same as described above: 67 white males and 33 black males. However, in this particular year, there are 20 white males arrested and only 10 black males arrested. The figure below, left, illustrates this example.

While it might be a first reaction to think that black males are experiencing arrest less than white males, the easiest way to investigate this is with the arrest RRI (shown below, right). Black males have an arrest RRI of 1, which means that black males are arrested at the same rate as white males. This particular toy example is not one of DMC: the rate of arrest of black males is commensurate with their occurrence in the population.



Toy Example 2: Bar Charts Showing Proportionate Arrests.

[Disproportionate \(minority?\) contact ... and more details about the RRI.](#)

Before proceeding, it is worth mentioning some nuances of DMC and its study. The first nuance is that *minority* is a loaded term. Just because a particular group might be a “minority” when considered in a larger community (such as a city, county, state, or country), that does not mean that group does not live in communities composed of mostly members of the same group. In other words, some people can find it insulting to be called a minority in a community in which the “minority” group is actually the majority. Moreover, “minority” has taken on something of a derogatory or dismissive connotation in popular usage, and for that reason alone might be eschewed. Furthermore, a “minority” issue might not be seen as important for all people. There are surely other reasons, but these are three reasons that acknowledge the difficulty of using the word “minority” in disproportionate minority contact. Accordingly, from here onwards, the author will use the term *disproportionate contact (DC)* or simply *disproportionality*. She chose to include DMC in the title of this report so that it could remain searchable in a literature in which DMC is still a common term.

The second nuance is that disproportionate contact almost invariably means excess contact, or RRIs > 1 (in which the reference group has a RRI of 1). A RRI < 1 is meaningful; e.g., an arrest RRI of 0.5 means that the group was arrested half as often as the reference group. However, although meaningful and also disproportionate, RRIs < 1 are simply not the worry in practice. Yet, DC analyses should convey more than just when RRIs for the data are greater than 1; DC analyses should convey when the groups

truly experience disproportionality. This is to say that DC analyses should report RRI differences between groups when those differences are not due to chance.¹ To minimize chance, RRI analyses in this report were subject to the following conditions:

1. All groups considered (i.e., for the purposes of this report, combinations of age, sex, race, and ethnicity) constituted at least 1% of the total population considered (i.e., populations varying by age); otherwise, numbers for that group were denoted with “*” and were not used in RRI calculations.
2. For any specific RRI analysis (e.g., examining arrests by specific offenses), the group considered needed to have at least 5 members (e.g., of that particular age-sex-race-ethnicity combination for that specific offense); otherwise, numbers for that group were denoted with “**”. In order to increase the numbers involved, this report “pools” arrest data over three years from 2011–2013 and also “pools” population data over the same time span. The effect is that rather than having three RRIs for each year (and perhaps averaging them),² there is only one RRI for the three-year period.
3. For any specific RRI analysis (e.g., examining arrests by specific offenses), the reference group needed to have at least 5 members (e.g., for that specific offense); otherwise, numbers for that reference group and all groups to be compared with it were denoted with “**”.
4. RRIs < 1.4 were not reported in some tables; instead, “-” replaced that number. The author is unaware of the existence of an exact method for determining which RRIs reflect actual disproportionality. One approximate approach is to choose values farthest from one. So, a RRI=2, probably does reflect actual disproportionality, whereas a RRI=1.2 might simply be a matter of chance that is not indicative of real discrepancy. Because a limit needed to be established, the author chose 1.4. Readers can interpret RRIs for themselves, understanding that the larger a RRI is, the more likely it is to reflect actual disproportionality. RRIs that are close in value (e.g., 0.95 and 1.0) should not be understood to be statistically different.

The meaning of RRI symbols, reviewed.

These symbols are explained above. Please refer to the RRI analysis in [Appendix A](#) to see all three symbols used in context.

Symbol	Meaning
*	Indicates that the group constitutes less than 1% of the juvenile population under consideration.
**	Indicates that for the analysis, fewer than five people are present in either the reference group or in the group considered.
-	Indicates a RRI < 1.4.

The third nuance is that disproportionality can be investigated with the RRI for a variety of concerns, not just arrests. For example, RRIs can be calculated for various criminal justice decision points (e.g.,

¹Refer to this publication for the steps in calculating a RRI and the considerations of statistical significance: <http://www.ojdp.gov/dmc/pdf/StepsinCalculatingtheRelativeRateIndex.pdf>. Beyond this publication, the Office of Juvenile Justice and Delinquency Prevention (OJJDP), OJP, DOJ offers helpful resources for DC: <http://www.ojdp.gov/dmc/>.

² This publication refers to the case of three RRIs for each year that are then averaged as a “Rolling RRI”: <http://muskie.usm.maine.edu/justiceresearch/Publications/Juvenile/DMC.FINAL.05.15.2015.pdf>. The author has chosen, instead, to create her own “pooled RRI” over three years.

referral, diversion, detention, petitions, delinquency, probation, and confinement)³ and criminal elements (e.g., weapons, drugs). RRI calculations are quite flexible in discovering disproportionality, and really only require different “groups” for which the population proportions (whether that is the general population or the population present at a decision point, etc.) can be calculated. Therefore, readers should expect to see analyses using RRI on more than just arrestees of different groups.

The fourth nuance is that discovering DC does not automatically uncover the cause of DC. Likely, the causes are systemic, complicated, and subconscious—among other mysterious adjectives. That said, there should be no “rush to judgment” about the various entities involved, e.g., police officers carrying out an arrest. This report leaves all causes open; it hopes to show what is happening so that future investigations can be informed and directed.

A case of disproportionate contact? South Carolina youth arrests for offenses at school using the South Carolina Incident-Based Reporting System (SCIBRS) Data 2011–2013.

This report⁴ investigates whether the following special circumstances reflect disproportionate contact: South Carolina youth arrests (that took place in 2011–2013 of youth under 18 years of age) for offenses at school (Monday–Friday, 6am–6pm).

Investigating disproportionate contact using SCIBRS data and population data.

This report uses two sources of data: arrest data from the South Carolina Incident-Based Reporting System (SCIBRS)⁵ and population data from the Missouri Data Center. The population data will be discussed shortly; first, consider the SCIBRS data.

The SCIBRS is compatible with the Federal Bureau of Investigation’s (FBI) National Incident-Based Reporting System (NIBRS). The SCIBRS data results from approximately 275 law enforcement agencies reporting incident information to the South Carolina Law Enforcement Division (SLED), which manages the SCIBRS. SLED provides support to law enforcement agencies through auditing, training, and guidance on coding individual incidents. SLED also stores every incident submitted by the law enforcement agencies on a state repository and submits those same incidents to the FBI. This repository has protected access.

SLED granted the author permission (because of her affiliation with the SC SAC) to query this repository for data that she could link, clean, and analyze for this report. Everything the author saw was

³See this report by the Maine SAC, which provides a full example of the RRI applied to multiple criminal justice decision points, as well as a clear interpretation of the RRI in these specific circumstances: <http://muskie.usm.maine.edu/justiceresearch/Publications/Juvenile/DMC.FINAL.05.15.2015.pdf>. This report also explains the RRI with mathematical formulas, examples, and ‘visuals’ that are not numeric.

⁴ This report is a follow-up to Robert McManus’s 2012 report on juvenile DC that he completed for the SC SAC. In this report, he identified schools as a location deserving further investigation. His report can be found here: <http://www.scdps.gov/ohsjp/stats/Juveniles/RacialDisproportionalityJuvenileArrests.doc>. His presentation of findings from this report can be found here: <https://www.youtube.com/watch?v=TJ5o29oUjll>.

⁵ SCIBRS 2013 was released in February 2016. At the time of this report’s writing in June 2016, it was the most recent year of SCIBRS data available.

anonymized. Present in the data, however, were several variables for analysis, including arrestee age, sex, race, ethnicity, arrest offense, arrest type, disposition, drugs seized, and weapons seized.

In SCIBRS arrest data, drugs, weapons, and arrest offenses can all be multiple for a single arrestee; the author unduplicated so that the “worst” of each was kept. Doing so conferred priority to demographics: the characteristics of each arrestee were counted only once. In the actual data resulting from the query, drugs turned out not to be multiple for any arrestees. In cases of multiple weapons for a single arrestee, the author gave priority to firearms. In cases of multiple arrest offenses for a single arrestee, the author retained for arrestees the most serious offense as determined by FBI hierarchy. This hierarchy (for the arrest offenses present) can be detected by reading from left to right (or top to bottom, if applicable) on any of the tables or figures in this report that contain multiple offenses.

Racial-ethnic groups by sex (including RRI reference groups).

The SCIBRS offers two values for ethnicity: Hispanic and non-Hispanic. For race, there are five values: white; black; American Indian or Alaskan Native; Asian; Native Hawaiian or other Pacific Islander. Since RRI takes into account population—and because this report requires individual years of age for intercensal years—the only available racial categories for population queries⁶ are the four so-called “bridged race categories”: white; black; American Indian or Alaska Native; Asian or Pacific Islander.⁷ To adjust the SCIBRS data to match the available population data, the five values for race were collapsed to the four bridged race categories used in population queries. This was accomplished by combining the Asian and Native Hawaiian or other Pacific Islander groups.

Finally, taking into account ethnicity and the 1% rule discussed [above](#) (especially as it maintained distinction between the sexes), the author created the following eight sex–race–ethnicity groups. The RRI reference groups for all analyses in this report are also indicated.

1. White Males (RRI Reference Group for Males, RRI = 1)
2. Black Males
3. Hispanic Males
4. Other Males
5. White Females (RRI Reference Group for Females, RRI = 1)
6. Black Females
7. Hispanic Females
8. Other Females

These groups completely span the population without any overlap. This means that any race can be put in the Hispanic groups 3 or 7, as long as the accompanying ethnicity indicated is “Hispanic”. This also

⁶ The author used the Missouri Data Center’s “Data Extracter” [sic], referred to as *Dexter*, to design custom population queries. The queries for this report can be generated here (<http://mcdc.missouri.edu/cgi-bin/uexplore?/pub/data/popests/nchsбри>) by clicking on the link for “scnchsbridged201x.sas7bdat”. More general queries can begin here: <http://mcdc.missouri.edu/applications/uexplore.shtml>. The author wishes to thank John Blodgett for cheerfully introducing her to the wonderful world of population queries: http://mcdc.missouri.edu/data/popests/Queries/Notes%20for%20nchsбри_aggbysex.htm. Other queries are possible, including those crossing counties and ethnicity (such as was necessary for this report). Appreciation is also due to Dennis Dickerson at the South Carolina Revenue and Fiscal Affairs Office, who helpfully recommended the vast resources of the Missouri Data Center in the first place.

⁷ For more information about the bridged race categories, see http://www.cdc.gov/nchs/nvss/bridged_race.htm.

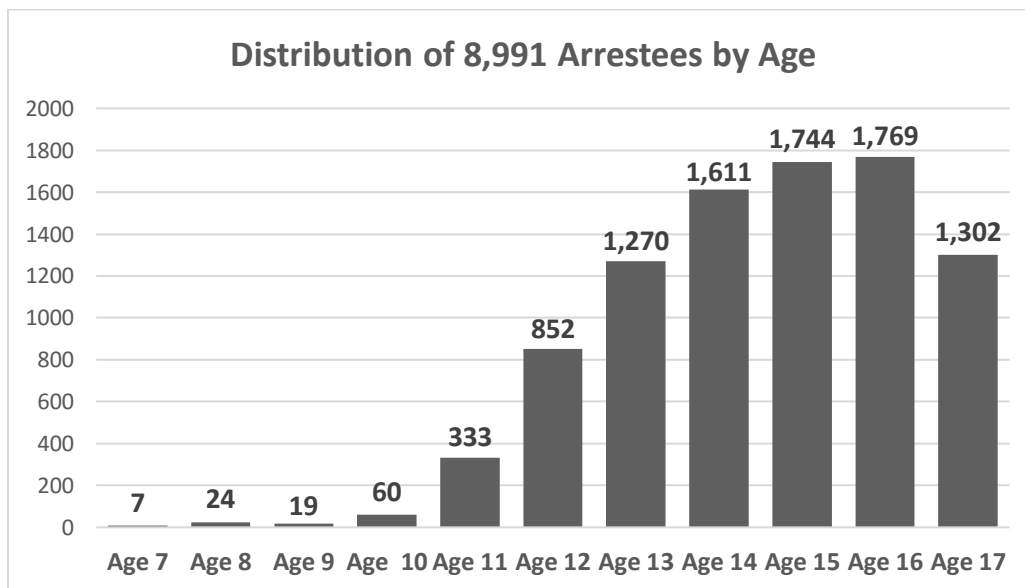
means that the other groups (i.e., apart from groups 3 and 7) are ethnically non-Hispanic. Finally, the “Other” category consists of Asians, Native Hawaiians and other Pacific Islanders, American Indians and Alaskan Natives. This 1–8 grouping confers the benefit of including Hispanics in the analysis, as well as differentiating the sexes (especially important because the sexes tend to commit crime at different rates; combining them only dilutes the analysis).

Learning more about the youth arrestees.

Theoretically, any number of youth arrestees with any age under 18 (e.g., arrestees five years old) could have been present in the SCIBRS query conducted for this report: South Carolina youth arrests (that took place in 2011–2013 of youth under 18 years of age) for offenses at school (Monday–Friday, 6am–6pm). In actuality, however, the query resulted in 8,991 arrestees aged 7 through 17. See below for the distribution of 8,991 arrestees by age.

Because there are relatively few arrestees per age, RRI analyses would not have sufficient numbers of arrestees in each racial–ethnic category for all the age categories. For this reason, the author chose to increase arrest numbers by combining the arrestees into age groups for further investigation: ages 7–9, ages 10–16, and age 17. These groups take into account the data present (e.g., the youngest arrestees actually reported are age 7), federal reporting requirements for South Carolina (for ages 10–16), and the youth who are no longer legally considered juveniles but who are still subject to protection by mandated reporting of abuse (17-year-olds).

Ultimately, the 7–9 age group did not meet the [RRI conditions](#) previously discussed. Accordingly, no analyses for this age group are shown. The author completed RRI analyses for ages 10–16 and age 17 and found them to be similar. For clarity of presentation, RRI analyses will be presented for the 10–16 year-old subset, while general descriptive statistics will be provided for all 8,991 arrestees aged 7–17.



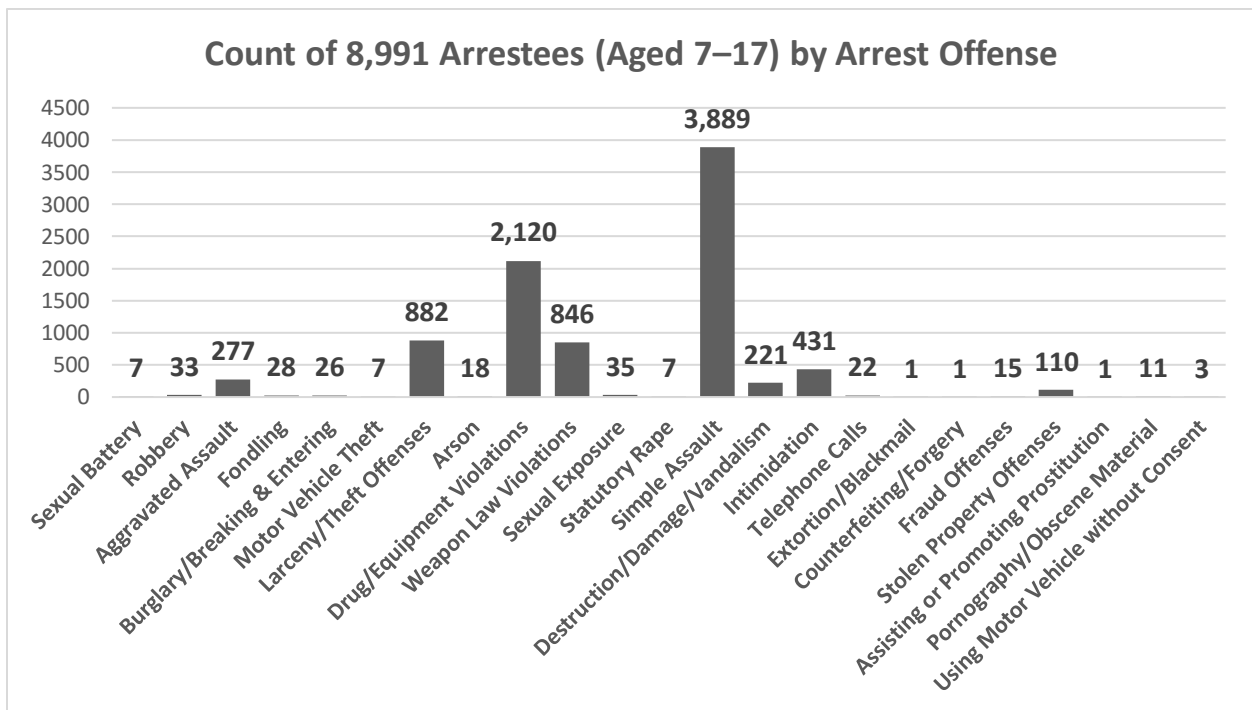
Distribution of 8,991 Arrestees by Age.

The distribution of ages for the arrest data is informative. Similarly informative is looking into the arrest offenses. Which offenses are leading to the arrest of youth? See below for the distribution of the 8,991 arrestees by arrest offense. Recall that the offenses start with the most serious offenses (according to FBI hierarchy) on the left of the figure and proceed to the least serious offenses on the right.

Thus read, the most common arrest offense is of moderate seriousness: simple assault, which is “an unlawful physical attack by one person upon another where neither the offender displays a weapon, nor the victim suffers obvious severe or aggravated bodily injury involving apparent broken bones, loss of teeth, possible internal injury, severe laceration, or loss of consciousness.”⁸

Even though there are 23 arrest offenses⁹ present in the data, merely four of them account for 86% of total arrests. These can be seen as the tallest groups in the figure below, and are explicitly named in the following numbered list:

1. Simple Assault, the arrest offense recorded for 3,889 arrestees—43% of arrestees.
2. Drug/Equipment Violations, the arrest offense recorded for 2,120 arrestees—24% of arrestees.
3. Larceny/Theft Offenses, the arrest offense recorded for 882 arrestees—10% of the arrestees.
4. Weapon Law Violations, the arrest offense recorded for 846 arrests—9% of the arrestees.



Distribution of Arrestees by Arrest Offense.

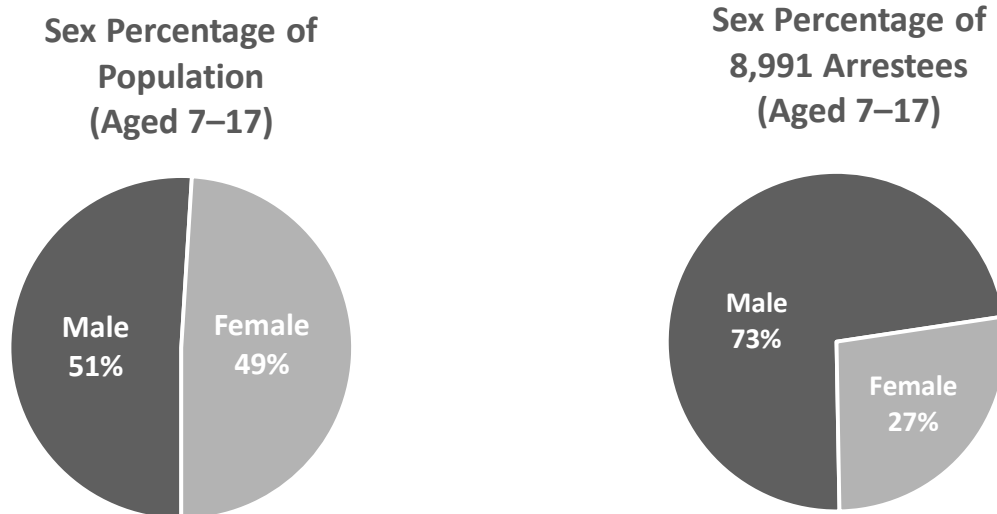
⁸ SCIBRS Manual, p. 19. This manual is available directly from the SCIBRS Division at SLED.

⁹ See [Appendix B](#) for offense definitions.

Demographic comparison: population of South Carolina youth aged 7–17 from 2011–2013 vs. arrestees aged 7–17 from 2011–2013.

Looking at the ages and offenses present in the arrest data is bringing the data into focus. As the [toy examples](#) demonstrated, a basic understanding of population demographics places the arrest data in context so that a more complete investigation can take place into whether there is disproportionate contact in South Carolina youth arrests for offenses at school in years 2011–2013.

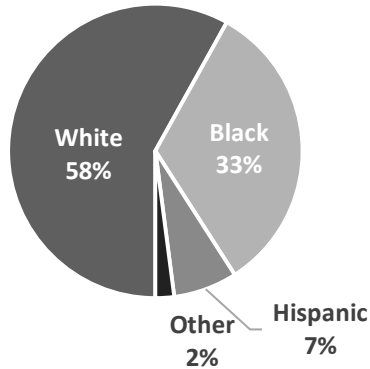
Consider first the sex percentages in the South Carolina youth population for ages 7–17 in years 2011–2013. The pie chart on the left shows that male youth and female youth are represented approximately equally in the population. However, the pie chart on the right shows that the equal numbers of sexes in the population at large do not hold for the arrestees. Instead, male youth are roughly three times more prevalent in the arrested group than are female youth. Were the arrestees distributed as in the population, separate consideration of sexes would be unnecessary; however the actual data emphasizes the importance of distinguishing between the sexes in the analysis, whenever possible. Otherwise, statistics for male youth will be diluted, and statistics for female youth will be concentrated. Avoiding this phenomenon is precisely why the author chose to separate the sexes for RRI analysis and to have a reference group with RRI = 1 for each sex group.



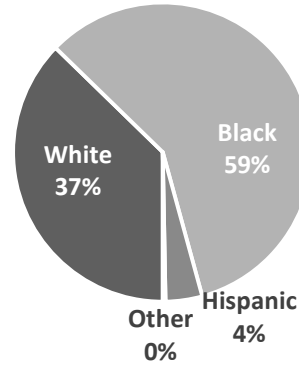
Pie Charts of Sex Percentage in Population (Aged 7–17) and Arrestees (Aged 7–17).

Now consider how—for ages 7–17 and years 2011–2013—the racial–ethnic makeup of the South Carolina youth population (next page, left) differs from that of the arrestees (next page, right). The most noticeable changes are between the percentage of white youth and black youth. The population is comprised of 58% white youth and 33% black youth; the arrestee percentages are so disproportionate as to be nearly exchanged: there are 59% black youth and 37% white youth. The pie charts on the next page support the presence of disproportionate contact of black youth in South Carolina youth arrests (that took place in 2011–2013 of youth under 18 years of age) for offenses at school (Monday–Friday, 6am–6pm).

Racial–Ethnic Percentage of Population (Aged 7–17)



Racial–Ethnic Percentage of 8,991 Arrestees (Aged 7–17)

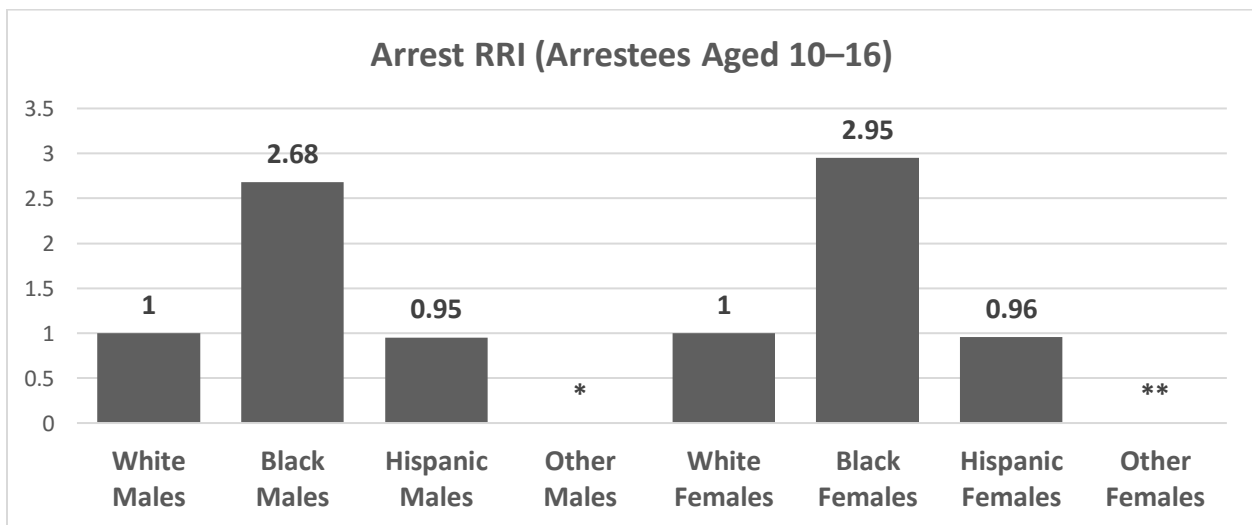


Pie Charts of Racial–Ethnic Percentage in Population (Aged 7–17) and Arrestees (Aged 7–17).

The remainder of this report will serve to investigate the nature of disproportionate contact in this context. The SCIBRS is a rich source of data for disproportionality analyses, containing information for each arrestee about sex, race, ethnicity, arrest offenses, arrest type, disposition, drugs, and weapons. Because each arrestee should have data values recorded for sex, race, ethnicity, arrest offenses, arrest type, and disposition, those variables will be analyzed first. Only some arrestees are involved with drugs and weapons, so those variables will be analyzed last.

Yes, a case of disproportionate contact. Now, how much and in what?

While the pie charts of racial–ethnic percentages above indicate disproportionate contact for black youth, a finer-grained tool for determining the degree of DC is the arrest RRI. The author conducted a RRI analysis using the [eight groups](#) previously mentioned for youth arrestees aged 10–16, with white males serving as the RRI reference group for males and white females serving as the RRI reference group for females. The arrest RRIs are shown in the bar chart below.



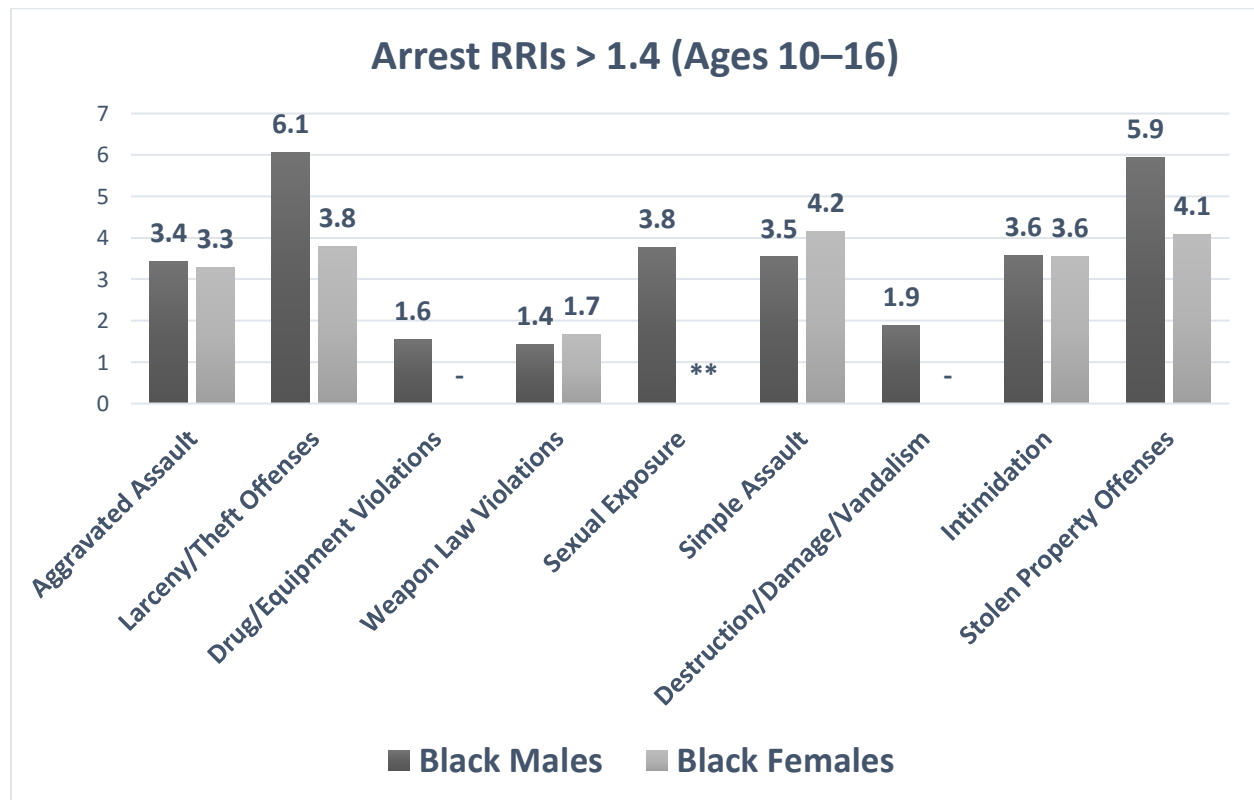
Bar Chart of Arrest RRIs for Juveniles Aged 10–16.

Other males constituted less than 1% of the juvenile population under consideration, and other females had too few arrestees for a RRI analysis. Hispanic males and Hispanic females were statistically indistinguishable from the reference groups of white males and white females, respectively. This bar chart supports the conclusion that black youth (both male and female) experienced disproportionate contact in arrests for school offenses during years 2011–2013.

How much disproportionate contact? For offenses at school in 2011–2013 black males were arrested at 2.68 times the rate of white males. Black females were arrested at 2.95 times the rate of white females. More approximately, in South Carolina in 2011–2013, black youth were arrested for school offenses at nearly three times the rate of white youth.

Recall that “1.4 times the rate of the reference group” is the (albeit, arbitrary) line this author drew for reporting RRIs that are not likely due to chance but which probably reflect actual disproportionate contact. When the author conducted a further RRI analysis of the youth arrests using specific offense categories, the only groups with RRIs > 1.4 were black males and black females. The arrest offense for which arrest RRIs were greater than 1.4 are shown below in the bar chart. Again, reading from left to right are the most to least serious offenses according to FBI hierarchy.

Readers can examine the bar chart of offenses. More context is available in [Appendix A](#), which features the counts and RRIs that underlie the bar chart. As an example demonstrating how to “read” the RRIs below, black males were arrested at 6.1 times the rate of white males for larceny/theft offenses and at 3.6 times the rate of white males for intimidation. As another example for interpretation, black females were arrested at 4.2 times the rate of white females for simple assault.



Bar Chart of All Groups of Arrestees Aged 10–16 That Had Arrest RRIs > 1.4.

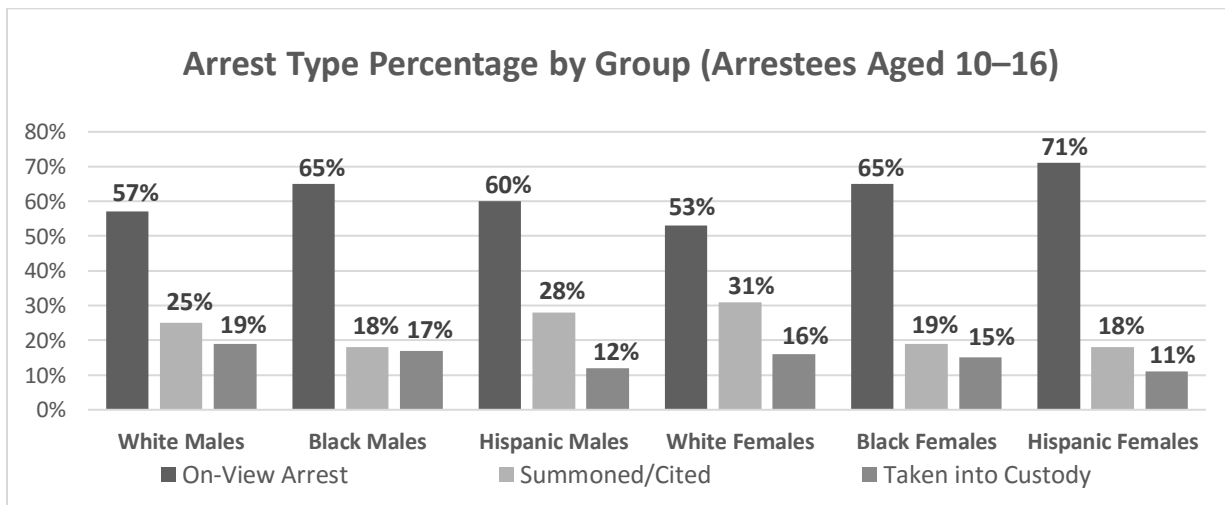
Other considerations: not all contact is clearly disproportionate.

Beyond demographics and arrest offenses, each arrestee will have a type of arrest and a nature of detention (also known as disposition, which for juveniles ranges from being released to parents with a warning to being turned over for adult detention and court).¹⁰ Examining these circumstances of arrest informs questions of disproportionality: once “in the system,” do different groups of youth experience the various types of arrests and detentions in different proportions?¹¹

For each group, the first bar chart shows the proportion of arrestees who experienced the three types of arrest, and the next bar chart shows the proportion of arrestees who experienced the two types of disposition. The author chose to omit arrest type groupings for other males and other females aged 10–16, because these groups had only 18 and 4 arrestees, respectively. Such few cases would result in meaningless proportions when divided up by arrest type or disposition.

The first bar chart of arrest type percentage by group shows that the relation of arrest types *within* each group (the relation of heights of each of the three shaded rectangles for each group) is similar: a tall dark rectangle, followed by a smaller light rectangle, followed by a yet smaller medium grey rectangle. This pattern holds for each group: youth from all groups were most often arrested without a warrant or previous incident report. Further, for *all* groups of youth, the next-most-common “arrest” type resulted in not being taken into custody, followed by being arrested based on a warrant or previous incident.

The pattern across groups is similar, as well: dark grey rectangles are roughly the same height; all light grey rectangles are roughly the same height; all medium grey rectangles are roughly the same height. All three types of arrests show up in similar proportions. The similarity of arrest type percentages—both within and across groups—does not support disproportionality.



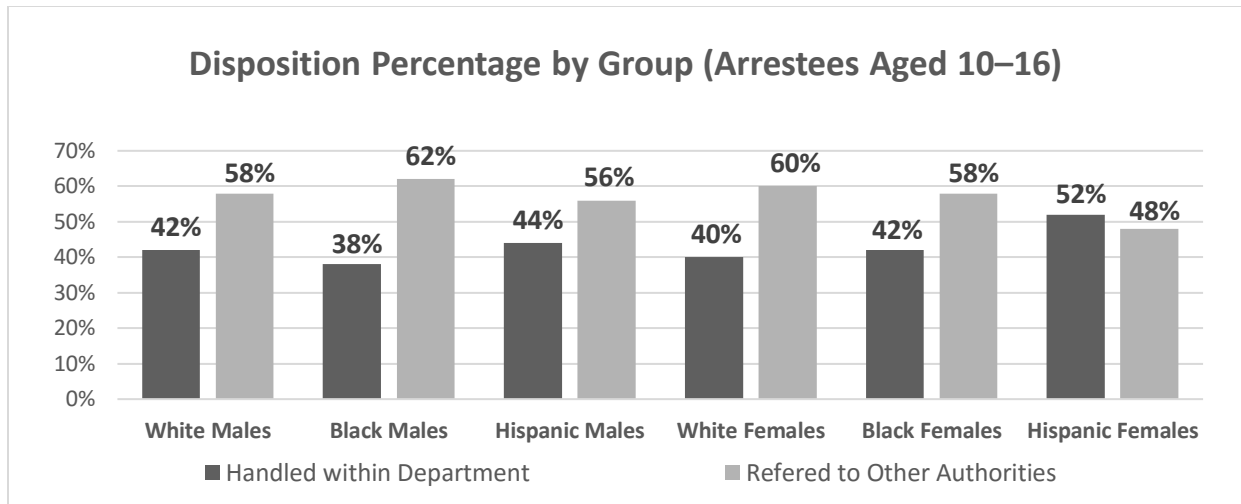
Bar Chart of Arrest Type Percentage for Arrestees Aged 10–16.

The next bar chart shows the proportion of arrestees who were subject to the two kinds of disposition. Like the arrest type percentages, the disposition percentages show similarity both within and across

¹⁰ See [Appendix B](#) for definitions of types of arrest and disposition.

¹¹ Notice that RRIIs are not used in this case. This approach is possible, though, and would similarly employ contact points like <http://muskie.usm.maine.edu/justiceresearch/Publications/Juvenile/DMC.FINAL.05.15.2015.pdf>.

groups. I.e., there is no clear indication of disproportionality in either arrest type or disposition.

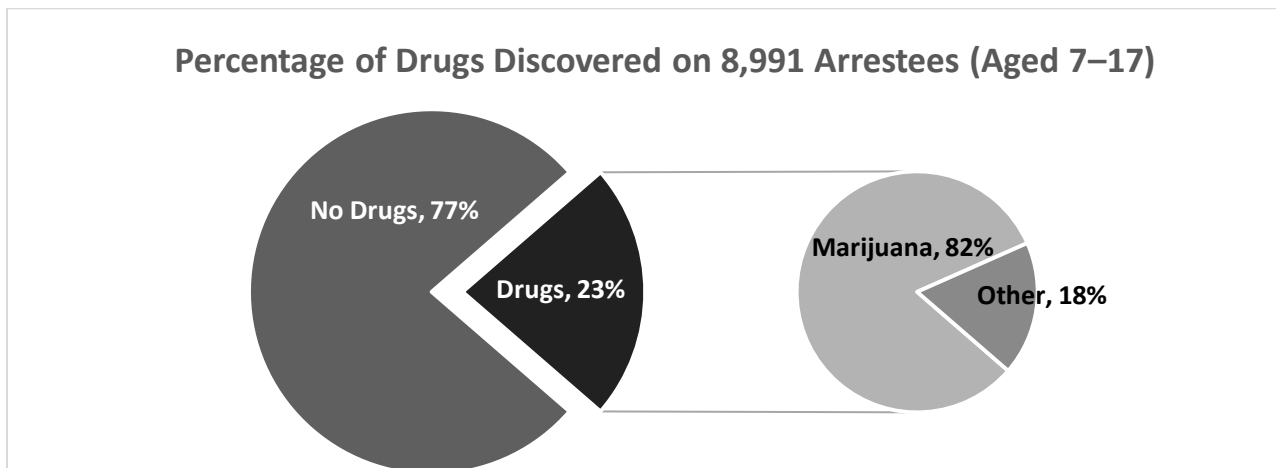


Bar Chart of Disposition Percentage for Arrestees Aged 10–16.

Is there other disproportionality in the arrest data? Yes.

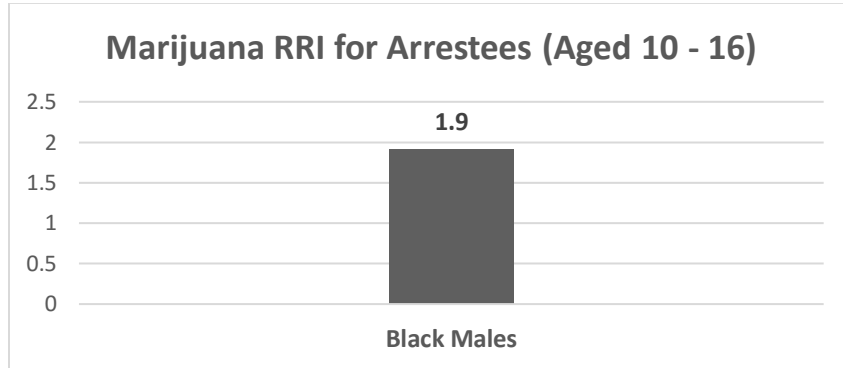
The SCIBRS data contains two other data elements for examining disproportionality involving arrestees, which only some arrestees will have associated with them: drugs and weapons seized. Given that the arrestees are youth, these data elements take on even more consequence than usual. Both drugs and weapons can be used in RRI analyses similar to the arrest RRIs and arrest offense RRIs. Recall that RRI analyses can be applied to a [variety of criminal elements](#).

The pie of pie chart below shows the percentage of drugs discovered on the entire group of 8,991 arrestees aged 7–17. In 77% of arrests, no drugs were discovered. In the remaining 23% of arrests, drugs were discovered; of these cases in which drugs were discovered, marijuana accounted for a whopping 82% of those cases. A smattering of a dozen other SCIBRS categories of drugs accounted for the remaining 18% of drugs. In other words, most arrestees were not discovered with drugs—but when they were, marijuana was by far the most commonly discovered drug.



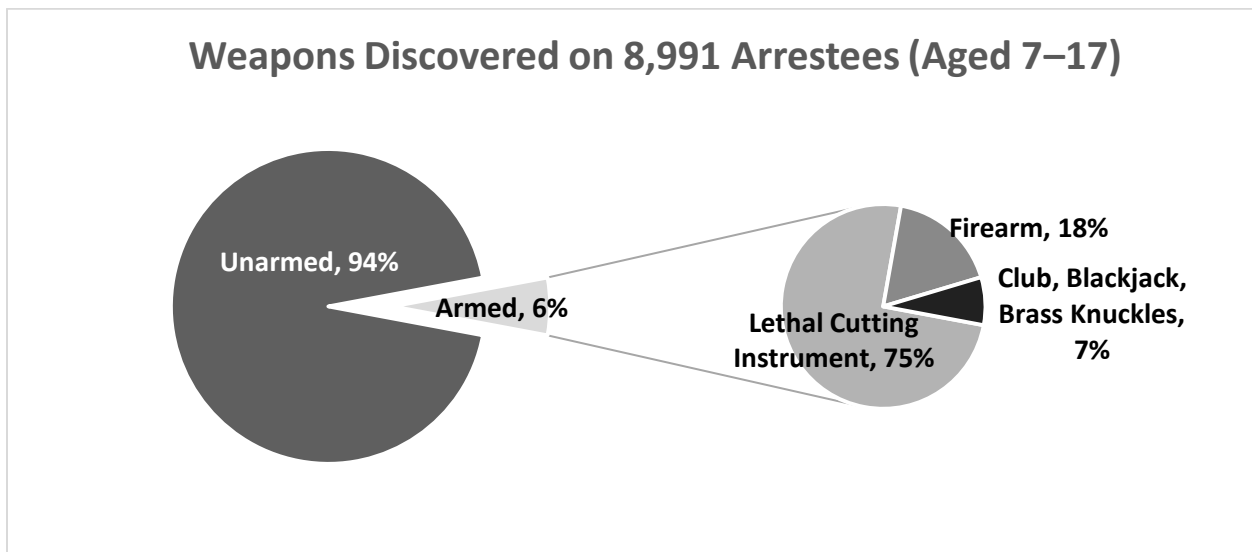
Pie of Pie Chart for Drug Type Percentage Discovered on 8,991 Arrestees Aged 7–17.

Since marijuana was by far the most commonly discovered drug for the entire group of arrestees, the RRI analysis of drugs for youth aged 10–16 focused solely on marijuana. For this age group, black male arrestees were the only group with a Marijuana RRI > 1.4: black males were found with marijuana at 1.9 times the rate of white males.



Bar Chart of All Groups of Arrestees Aged 10–16 That Had Marijuana RRIs > 1.4.

The next pie of pie chart shows the percentage of weapons discovered on the entire group of 8,991 arrestees aged 7–17. For the vast majority of arrestees (94%), police did not find weapons. However, in 6% of cases, the youth arrestees were armed. In cases where they were armed, the youth arrestees were armed with a lethal cutting instrument 75% of the time, a firearm 18% of the time, and a club, blackjack, or brass knuckles 7% of the time.



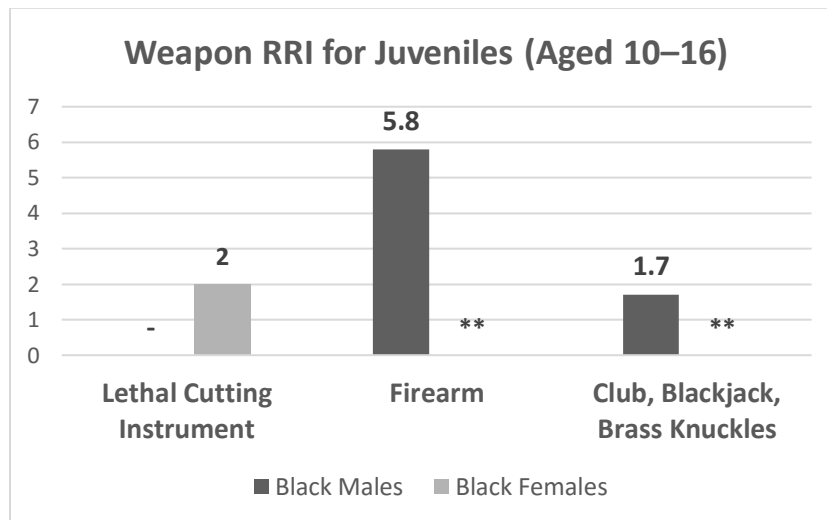
Pie of Pie Chart for Weapons Percentage Discovered on 8,991 Arrestees Aged 7–17.

While lethal cutting instruments were the weapons discovered three-quarters of the time (when weapons were discovered at all), all weapons were included in the RRI analysis. Firearms—especially in the hands of youth—are serious enough to deserve inclusion in the analysis.

Using the RRI, the 10–16 age group was analyzed for weapons discovered. The only groups with weapon RRIs greater than 1.4 were black males and black females. The next bar chart shows the weapon RRIs for these groups.

Black males were discovered with firearms at 5.8 times the rate of white males and with a club, blackjack, or brass knuckles at 1.7 times the rate of white males. While the latter is troubling, the firearm statistic is difficult to overstate: being discovered with firearms at nearly 6 times the rate of the reference group strongly supports disproportionality.

Black females were discovered with a lethal cutting instrument at twice the rate of white females. There were insufficient numbers of arrestees in the reference group (white females) and in the examined group (black females) to complete RRI analyses for the categories of firearm or club, blackjack, brass knuckles.



Bar Chart of All Groups of Arrestees Aged 10–16 with Weapon RRI > 1.4.

Remarks about data limitations.

The richness of the SCIBRS data allowed for an investigation into whether disproportionality was occurring in the context of arrests of youth for offenses at school. Included in the analyses were various data elements: arrestee demographics, arrest offenses, arrest types, dispositions, drugs, and weapons. Indeed, the SCIBRS data offers such an abundance of data elements that seemingly countless analyses might be conducted. However, it is expected that the SCIBRS (designed to give a general overview of crime) cannot be all things to all analyses, and so it was here.

This analysis met with the following data limitations:

- *Only Group A offenses could be included.* In SCIBRS, offenses are divided into two groups: Group A, which consists of the more serious offenses, and Group B, which consists of the less serious offenses. These two groups of offenses are subject to different reporting requirements. For Group A offenses, law enforcement must report both incidents (regardless of whether there was an arrest) and arrests. For Group B offenses, though, law enforcement reports only arrests (so incidents go unreported to the SCIBRS).

This report dealt with arrests, so it would seem that both Group A and Group B offenses would be available for analysis. This would even be preferable, since Group B offenses are less serious, and this report on youth arrests in school might benefit from including less serious offenses. It turns out, though, to be impossible to isolate “youth arrestees in school” by looking at just arrest information. Extracting

data for “youth arrestees in school” actually requires querying two different segments: the arrestee segment and the offense segment.

Segments are what law enforcement uses to include different information in either a Group A Incident Report or a Group B Arrest Report. The Group A Incident Report will have an administrative segment, and at least one offense segment, one victim segment, and one offender segment. If an incident has more than one offense, victim, or offender, there are additional segments reported for those elements. There is also the possibility of property segment(s) and arrestee segment(s), with the “(s)” indicating that there may also be more than one element of property or arrestee. The Group B Arrest Report consists of an arrestee segment (and as many Group B Arrest Reports will be submitted as there are arrestees).

Each of these segments has different information. Specifically, the arrestee segment and offense segment bear crucially upon this report. The arrestee segment contains information about Group A offenses and Group B offenses. So, were this analysis interested in only “youth arrestees”, the arrestee segment could be queried for both Group A and Group B offenses to learn more about all reported offenses. But, this analysis was about “youth arrestees *in school*.” “In school” refers to a location for the offense, which is a data element contained in the offense segment (but not the arrestee segment).

Essentially, both Group A and Group B offenses are discoverable for youth arrestees in the arrestee segment, but when this information is linked to the offense segment to get location information (for schools), the Group B offenses get “orphaned” since the offense segment contains only Group A offenses. In this way, one choice about the data (location) unexpectedly restricts the type of offense (only Group A) that it is even possible to investigate. This consequence originates with the very design of SCIBRS and its reporting requirements.

- *Arrestees could be isolated only at the level of the incident, as opposed to at the level of all arrestees.* The SCIBRS contains neither personally identifiable information (PII), nor a unique global identifier for people (whether victims, offenders, or arrestees). Even without these identifiers, it can distinguish between multiple arrestees within each incident. As an example, for this report, if two youths were arrested for offenses at school, those two youths could be distinguished as two youths (even if they had exactly matching demographics, offenses, etc.). However, the SCIBRS offers no way of isolating one arrestee at the level of all arrestees. In other words, if one youth is arrested on three different occasions, that youth will appear in the data three different times (along with that arrestee’s repeated demographic data).

This issue bears on the analysis here by including demographic details each time the same youth is arrested—not necessarily a bad thing for a disproportionate contact report, because it might be preferable to count each time youth are arrested rather than the number of unique arrestees. But, this is the state of the data, and there is no choice involved. While this data limitation has, perhaps, no ill effect on this analysis, it might negatively affect other kinds of analysis (that really do require the count of unique arrestees at the level of all arrestees).

- *Window arrests were not included.* Window arrests are arrests that happen two or more calendar years after the initial incident. It is a current (rather than a permanent or enduring) quirk that the SCIBRS repository does not display weapons data for window arrests, forcing the author to choose between knowing about weapons and including window arrests with the other arrests. Since there were few

window arrests, and because weapons are of especial concern in youth arrests, the author chose to know about weapons. The consequence was that a small percentage of arrests (window arrests) were not analyzed.

The author mentions these limitations not to dismiss the SCIBRS data, but to place it in context. The SCIBRS data is still an extremely informative and valuable resource that is the result of an immense cooperative effort by law enforcement. Truly, South Carolina benefits from one of the best crime reporting systems in the nation.

Appendix A: Counts of and RRI's for arrests of juveniles (aged 10–16) for offenses at school (SCIBRS 2011–2013).

Counts of Arrests of Juveniles (Aged 10–16) for Offenses at School (SCIBRS 2011–2013)								
Arrest Offense	White Males	Black Males	Hispanic Males	Other Males	White Females	Black Females	Hispanic Females	Other Females
Sexual Battery	0	6	0	0	0	0	0	0
Robbery	3	24	1	0	0	0	0	0
Aggravated Assault	58	111	7	0	23	43	1	0
Fondling	4	16	2	0	0	1	0	0
Burglary/Breaking & Entering	2	12	2	0	4	0	0	0
Motor Vehicle Theft	0	4	0	0	0	0	0	0
Larceny/Theft Offenses	131	443	19	1	48	104	5	0
Arson	9	5	1	0	0	0	0	0
Drug/Equipment Violations	704	610	64	6	175	68	7	0
Weapon Law Violations	318	251	33	4	65	62	7	0
Sexual Exposure	10	21	0	0	0	2	0	0
Statutory Rape	2	2	0	0	1	0	0	0
Simple Assault	669	1321	78	5	383	908	55	4
Destruction/Damage/Vandalism of Property	74	78	7	0	15	11	3	0
Intimidation	95	189	9	1	31	63	2	0
Telephone Calls	8	5	0	0	5	2	0	0
Extortion/Blackmail	1	0	0	0	0	0	0	0
Fraud Offenses	3	2	0	0	1	3	0	0
Stolen Property Offenses	16	53	2	1	6	14	2	0
Pornography/Obscene Material	5	0	0	0	4	1	0	0
Using Motor Vehicle without Consent	1	0	0	0	1	0	0	0

Relative Rate Indices for Arrests of Juveniles (Aged 10–16) for Offenses at School (SCIBRS 2011–2013)						
Arrest Offense	Black Males	Hispanic Males	Other Males	Black Females	Hispanic Females	Other Females
Sexual Battery	**	**	*	**	**	**
Robbery	**	**	*	**	**	**
Aggravated Assault	3.43	-	*	3.28	**	**
Fondling	**	**	*	**	**	**
Burglary/Breaking & Entering	**	**	*	**	**	**
Motor Vehicle Theft	**	**	*	**	**	**
Larceny/Theft Offenses	6.07	-	*	3.80	-	**
Arson	-	**	*	**	**	**
Drug/Equipment Violations	1.55	-	*	-	-	**
Weapon Law Violations	1.42	-	*	1.67	-	**
Sexual Exposure	3.77	**	*	**	**	**
Statutory Rape	**	**	*	**	**	**
Simple Assault	3.54	-	*	4.16	-	**
Destruction/Damage/Vandalism of Property	1.89	-	*	-	**	**
Intimidation	3.57	-	*	3.56	**	**
Telephone Calls	-	**	*	**	**	**
Extortion/Blackmail	**	**	*	**	**	**
Fraud Offenses	**	**	*	**	**	**
Stolen Property Offenses	5.94	**	*	4.09	**	**
Pornography/Obscene Material	**	**	*	**	**	**
Using Motor Vehicle without Consent	**	**	*	**	**	**

**" indicates that a racial-ethnic group constitutes less than 1% of the juvenile population aged 10–16 from 2011 through 2013.
 "**" indicates that for the arrest offense, fewer than five arrestees are present in either the reference group or the group considered.
 "-" indicates that the relative rate index is less than 1.4.

Appendix B: Descriptions for arrest, disposition, and offense.

All descriptions included here are quoted from the SCIBRS Manual, which is available directly from the SCIBRS Division at SLED.

Type of Arrest	Description
On-View Arrest	Apprehension without a warrant or previous incident report.
Summoned/Cited	Not taken into custody.
Taken into Custody	Apprehended based on a warrant and/or previously submitted incident report.

Type of Disposition	Description
Handled within Department	Released to parents, released with warning, etc.
Referred to Other Authorities	Turned over to juvenile court, probation department, welfare agency, other police agency, criminal or adult court, etc.

Arrest Offense	Description
Sexual Battery	Inclusive of rape (the carnal knowledge of a person, without the consent of the victim, including instances where the victim is incapable of giving consent because of his/her age or because of his/her temporary or permanent mental or physical incapacity), sodomy (oral or anal sexual intercourse with another person, without the consent of the victim, including instances where the victim is incapable of giving consent because of his/her age or because of his/her temporary or permanent mental or physical incapacity), and sexual assault with an object (to use an object or instrument to unlawfully penetrate, however slightly, the genital or anal opening of the body of another person, without the consent of the victim, including instances where the victim is incapable of giving consent because of his/her age or because of his/her temporary or permanent mental or physical incapacity).
Robbery	The taking or attempting to take anything of value under confrontational circumstances from the control, custody, or care of another person by force or threat of force or violence and/or by putting the victim in fear of immediate harm.
Aggravated Assault	An unlawful attack by one person upon another wherein the offender uses a weapon or displays it in a threatening manner, or the victim suffers obvious severe or aggravated bodily injury involving apparent broken bones, loss of teeth, possible internal injury, severe laceration, or loss of consciousness.

Arrest Offense	Description
Fondling	The touching of the private body parts of another person for the purpose of sexual gratification, without the consent of the victim, including instances where the victim is incapable of giving consent because of his/her age or because of his/her temporary or permanent mental or physical incapacity.
Burglary/Breaking & Entering	The unlawful entry into a building or other structure with the intent to commit a felony or a theft.
Motor Vehicle Theft	The theft of a motor vehicle.
Larceny/Theft Offenses	The unlawful taking, carrying, leading, or riding away of property from the possession or constructive possession of another person.
Arson	To unlawfully and intentionally damage or attempt to damage any real or personal property by fire or incendiary device.
Drug/Equipment Violations	Inclusive of drug/narcotic violations (the unlawful cultivation, manufacture, distribution, sale, purchase, use, possession, transportation, or importation of any controlled drug or narcotic substance) and drug equipment violations (the unlawful manufacture, sale, purchase, possession, or transportation of equipment or devices utilized in preparing and/or using drugs or narcotics).
Weapon Law Violations	The violation of laws or ordinances prohibiting the manufacture, sale, purchase, transportation, possession, concealment, or use of firearms, cutting instruments, explosives, incendiary devices, or other deadly weapons.
Sexual Exposure	The unlawful exposure of a person's sexual organs or other private parts for the purpose of sexual gratification.
Statutory Rape	Nonforcible sexual intercourse with a person who is under the statutory age of consent.
Simple Assault	An unlawful physical attack by one person upon another where neither the offender displays a weapon, nor the victim suffers obvious severe or aggravated bodily injury involving apparent broken bones, loss of teeth, possible internal injury, severe laceration, or loss of consciousness.
Destruction/Damage/Vandalism of Property	To willfully or maliciously destroy, damage, deface or otherwise injure real or personal property without the consent of the owner or the person having custody or control of it.

Arrest Offense	Description
Intimidation	To unlawfully place another person in reasonable fear of bodily harm through the use of threatening words and/or other conduct but without displaying a weapon or subjecting the victim to actual physical attack.
Telephone Calls	The unlawful use of telephones for harassment.
Extortion/Blackmail	To unlawfully obtain money, property, or any other thing of value, either tangible or intangible, through the use or threat of force, misuse of authority, threat of criminal prosecution, threat of destruction of reputation or social standing, or through other coercive means.
Counterfeiting/Forgery	The altering, copying, or imitation of something, without authority or right with the intent to deceive or defraud by passing the copy or thing altered or imitated as that which is original or genuine; or, the selling, buying, or possession of an altered, copied, or imitated thing with the intent to deceive or defraud.
Fraud Offenses	The intentional perversions of the truth for the purpose of inducing another person or other entity in reliance upon it to part with something of value or to surrender a legal right.
Stolen Property Offenses	Receiving, buying, selling, possessing, concealing, or transporting any property with the knowledge that it has been unlawfully taken, as by burglary, embezzlement, fraud, larceny, robbery, etc.
Assisting or Promoting Prostitution	To solicit customers or transport persons for prostitution purposes; to own, manage, or operate a dwelling or other establishment for the purpose of providing a place where prostitution is performed; or to otherwise assist or promote prostitution.
Pornography/Obscene Material	The violation of laws or ordinances prohibiting the manufacture, publishing, sale, purchase or possession of sexually explicit material, e.g., literature or photographs.
Using Motor Vehicle without Consent	The taking of a vehicle, without the expressed consent of the owner, for temporary use, when prior authority has been granted or can be assumed, such as in family or roommate situations, or unauthorized use by chauffeurs and others having access to the vehicle.