

Youth Risk Behaviors

Duval County High School Students 2009

Violence, Suicide, and Safety Behaviors

Key Findings

- *About 18% of students reported being hit by their boy/girlfriend in the past 12 months
- *Approximately 14% of high school students seriously thought about attempting suicide in the previous year
- *Almost 1/3 of students reported having ridden in a vehicle with a driver who has been drinking alcohol in the past 30 days
- *Approximately 16% of students reported being bullied at school
- *Over 7% of students carried a weapon to school in the past 30 days

Youth Risk Behaviors

The Youth Risk Behavior Survey (YRBS) is a self-administered, school-based, confidential, and anonymous survey that was conducted in Duval County Public Schools during the spring of 2009. This is part of a national effort by the Centers for Disease Control and Prevention (CDC) to obtain information pertaining to youth social behaviors. These behaviors include but are not limited to: violence, safety, sex, nutrition and weight management, suicide, and more. In the 19 public high schools in Duval County, 2,542 students participated.

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Why Monitor Violence, Suicide, and Safety Behavior?

The prevalence of violence, suicide, and safety mishaps in the high school population has always been an issue of public concern. Organizations like MADD® are prime examples of this very issue. According to *Healthy People 2010*, "The risk of injury is so great that most persons sustain a significant injury at some time during their lives. Nevertheless, this widespread human damage too often is taken for granted, in the erroneous belief that injuries

happen by chance and are the result of unpreventable "accidents." In fact, many injuries are not "accidents," or random, uncontrollable acts of fate; rather, most injuries are predictable and preventable." From this we can view the YRBS as a means of examining the frequency of behaviors that lead to negative outcomes.¹

This examination of the high school age group is of utmost importance as

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Why Monitor Violence, Suicide and Safety Behaviors?

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accident, injury, and violent acts are the leading causes of death among persons 1 to 18 years of age. This issue of addressing the behaviors of this age group is so important that *Healthy People 2010*, specifically points out the role this group has in perpetuating these risky acts. For example concerning violence: "Youth continue to be involved as both perpetrators and victims of violence. Elderly persons, females, and children continue to be targets of both physical and sexual assaults, which are frequently perpetrated by individuals they know. Examples of general issues that impede the public health response to progress in this area include the lack of comparable data sources, lack of standardized definitions and definitional issues, lack of resources to establish adequately consistent tracking systems, and lack of resources to fund promising prevention programs."¹ These behaviors are mirrored throughout Duval County, while it may be comparable to the state of Florida or even the national average, there is a high prevalence of risky behaviors that lead to injury or even death.

Why Monitor Youth Behaviors?

Monitoring risky behaviors within the high school population is critical for school and public health officials to understand the cause and effect of these behaviors and how they may or may not continue into adulthood. Health behavior patterns are often established in childhood and adolescence, leading to a lifestyle that contributes to many of the chronic diseases that plague our society today, including obesity, diabetes and heart disease. This transition into adolescence also prompts a rise in risky behaviors, which frequently leads to increases in motor vehicle accidents, violence, unprotected sexual activity, and drug and alcohol use.² As part of the National Initiative to Improve Adolescent Health by the Year 2010, the CDC and the Health Resources and Services Administration (HRSA) have identified six critical health behaviors for adolescents including alcohol and drug use, injury and violence (including suicide), tobacco use, nutrition, physical activity, and risky sexual behaviors.³ These measurable indicators are used to assess the status and progress of each of these health behaviors. It is these behaviors that the YRBS is designed to examine in the youth population. By implementing this type of self-reporting surveillance, one can, with a significant measure of reliability, monitor the behavior of the youth and readily identify those groups that

may or may not be at risk. This allows for the development of interventions and programs that directly target those groups that may be at most risk.

Adolescents are influenced by various levels and types of interpersonal relationships, which in turn, contribute to an adolescent's health and well-being.² Because of this complex system of adolescent influences, developing comprehensive approaches and interventions to promote adolescent health is often difficult. In addition, adolescent health is influenced by a wide array of socio-economic factors, such as education and poverty, which require more primary intervention techniques that can lead to societal and environmental changes, frequently resulting in policy change. Addressing these factors is challenging, costly and time consuming, and requires many levels of decision-making. In order to address adolescent health issues, surveillance of adolescent health indicators is necessary for planning, program implementation, evaluation, and policy change.



Duval County, Florida and U.S. High School Report Card

The Duval County data report card provides a comparison between local, state, and national data for youth risk behaviors for which data was available. U.S. data were not available for 2009 at the time of this report. Confidence intervals that do not overlap indicate statistical significance. The terms “significant”, and “statistically significant” are used interchangeably throughout this report. Duval County has a critical violence, suicide, and safety issue as it has statistically significant greater rates of these behaviors in 7 of the 10 shown in the report card. Local high school students report that 22.3% have carried a weapon in the previous 30 days, significantly higher than the state (17.3%) and national (18.0%) averages. Similarly, 7.8% have carried a weapon such as a gun, knife, or club, on school property in the last 30 days

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Risk Factors	Duval County Students 2009 95% (CI's)	Florida Students 2009 95% (CI's)	U.S. Students 2007 95% (CI's)
Violence			
Carried a weapon (for example, a gun, knife, or club at least one day during the 30 days before the survey)	22.3% ^{1,2} (20.3 - 24.6)	17.3% (16.1 - 18.5)	18.0% (16.3 - 19.8)
Carried a weapon (for example, a gun, knife, or club on <i>school property</i> at least one day during the 30 days before the survey)	7.8% ¹ (6.6 - 9.3)	4.7% (4.0 - 5.5)	5.9% (5.2 - 6.7)
Did not go to school because they felt unsafe at school or on their way to or from school (on at least one day during the 30 days before the survey)	14.4% ^{1,2} (12.8 - 16.1)	6.9% (6.1 - 7.8)	5.5% (4.7 - 6.30)
Who were threatened or injured with a weapon (for example, gun, knife or club on school property, one or more times during the 12 months before the survey)	13.9% ^{1,2} (12.0-16.0)	8.2% (7.4 - 9.0)	7.8% (7.0 - 8.8)
In a physical fight (one or more times during the 12 months before the survey)	34.9% ¹ (32.4 -37.6)	29.8% ³ (28.1 - 31.5)	35.5% (34.0 - 37.1)
Suicide			
Seriously considered attempting suicide (during the 12 months before the survey)	14.2% ¹ (12.8 - 15.8)	11.6% ³ (10.7 - 12.7)	14.5% (13.4 - 15.6)
Attempted suicide (one or more times during the 12 months before the survey)	9.9% ^{1,2} (8.4 - 11.8)	6.5% (5.8 - 7.4)	6.9% (6.3 - 7.6)
Safety			
Rarely or never wore a seat belt (when riding in a car driven by someone else)	16.1% ^{1,2} (14.2 - 18.0)	11.6% (10.3 - 13.0)	11.1% (8.9 - 13.8)
Rode with a driver who had been drinking alcohol (in a car or other vehicle one or more times during the 30 days before the survey)	30.8% (28.7 - 33.1)	27.6% (26.1 - 29.2)	29.1% (27.2 - 31.2)
Drove a car or other vehicle when they had been drinking alcohol (one or more times during the 30 days before the survey)	11.1% (9.1 - 13.6)	NA	10.5% (9.3 -11.9)

Confidence Intervals (CIs) of 95% are used to provide statistical markers to gauge real trends verses differences that are more likely to reflect insignificant variation of data from year to year.

¹Duval County statistically different from Florida; ²Duval County statistically different from the United States; ³Florida significantly different from the United States

Duval County, Florida and U.S. High School Report Card (continued from page 3)

prior to the survey, this is significantly higher than Florida (4.7%). Of high school students, 14.4% did not attend school due to feelings of being unsafe, with 34.9% reporting being in a physical fight. Both of these indicators of intimidation and violence are significantly higher for Duval County than for the state. In addition, the percentage of Duval students not attending school due to feelings of being unsafe was also significantly higher than the nation. Duval County was also significantly higher for having students injured or threatened by a weapon in the previous 12 months, with the county rate at 13.9% and the state and national at, 8.2% and 7.8%, respectively.

For suicidal behaviors, 14.2% of county students report having seriously considered suicide, which is significant when compared to the state but no different from the national average, with 11.6% for Florida and 14.5% for the nation. The consideration of suicide is significantly higher than those who actually attempted suicide (9.9%), yet this county rate is significantly higher than the state (6.5%) and the national (6.9%) averages. There were no significant differences for safety issues of automobiles and drinking, whether as a driver or passenger, with 30.8% reporting that they rode with a driver who had been drinking and 11.1% reporting that they had driven a car while being under the influence of alcohol.

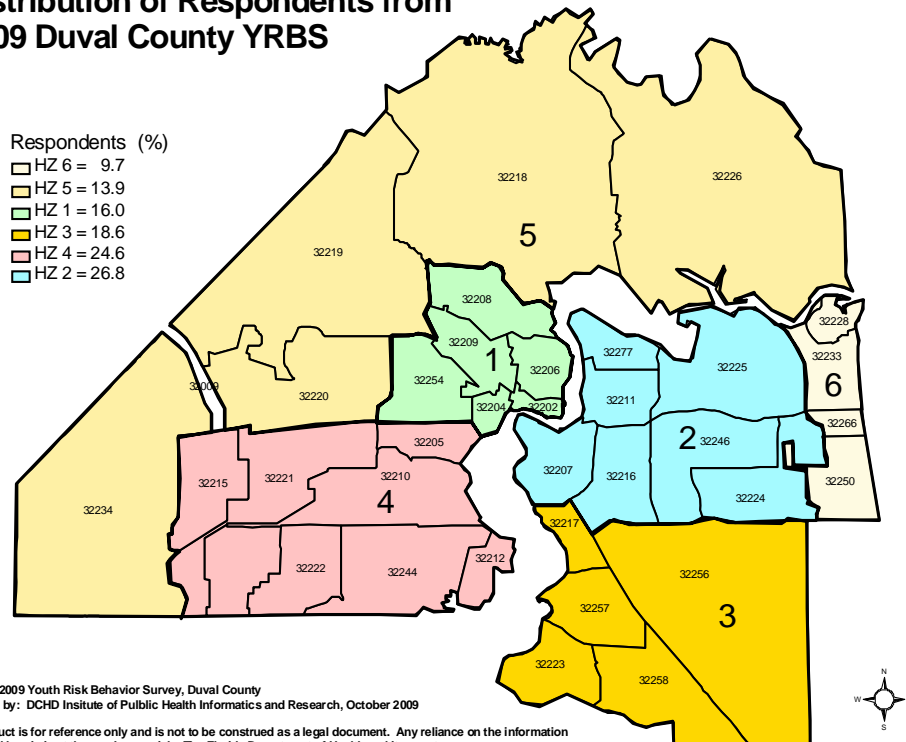
Duval County High School Report Card by Health Zone

Duval County is located on the northeast coast of Florida. The county is divided into six health zones made up of zip codes. These zones are based on Duval County Public Schools, Jacksonville Sheriff's Office, and Community Planning Action Council's existing geographic boundaries. Health zones, made of mutually exclusive zip codes, were created to increase the statistical reliability of zip code data for more targeted program planning, practical surveillance of health indicators, and to ensure confidentiality of data. Figure 1 shows the distribution of all student respondents, according to

(continued on page 6)

Figure 1

Distribution of Respondents from 2009 Duval County YRBS



Source: 2009 Youth Risk Behavior Survey, Duval County
Prepared by: DCHD Institute of Public Health Informatics and Research, October 2009

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Youth Risk Behaviors

Duval County High School Report Card by Health Zone

Risk Factors	Health Zone 1 2009	Health Zone 2 2009	Health Zone 3 2009	Health Zone 4 2009	Health Zone 5 2009	Health Zone 6 2009	Duval County 2009
	95% (CI's)	95% (CI's)	95% (CI's)	95% (CI's)	95% (CI's)	95% (CI's)	95% (CI's)
Violence							
Carried a weapon (for example, a gun, knife, or club at least one day during the 30 days before the survey)	24.4% (16.7 - 34.4)	22.4% (18.7 - 26.7)	21.5% (17.1 - 26.7)	21.0% (17.5 - 25.0)	27.0% (20.5 - 34.6)	21.1% (12.1-34.0)	22.3% ^{1,2} (20.3 -24.6)
Carried a weapon on school property (for example, a gun, knife, or club on school property at least one day during the 30 days before the survey)	5.3% (2.2 - 11.9)	8.5% (6.4 - 11.3)	6.5% (4.3 - 9.8)	7.6% (5.6 -10.4)	7.9% (5.2 -11.9)	3.0% (1.1 -8.0)	7.8% ¹ (6.6 - 9.3)
Did not go to school because they felt unsafe at school or on their way to or from school (on at least one day during the 30 days before the survey)	13.2% (8.4 - 20.0)	14.6% (11.5 - 18.5)	10.1% (7.1 -14.0)	13.4% (10.2-17.5)	12.1% (7.8 -18.3)	13.6% (7.2 -24.2)	14.4% ^{1,2} (12.8 -16.1)
Who were threatened or injured with a weapon (for example, gun, knife or club on school property one or more times during the 12 months before the survey)	14.0% (8.1-23.2)	15.3% (11.9- 19.4)	10.6% (7.4- 15.0)	11.1% (8.6- 14.1)	10.3% (6.3- 16.2)	8.1% (4.1- 15.4)	13.9% ^{1,2} (12.0-16.0)
In a physical fight (one or more times during the 12 months before the survey)	39.2% (31.0- 48.0)	33.6% (29.6 - 37.8)	30.3% (25.4 - 35.7)	33.7% (28.9 - 38.9)	35.6% (28.7 - 43.2)	33.3% (21.6 -47.4)	34.9% ¹ (32.4 -37.6)
Seriously considered attempting suicide (during the 12 months before the survey)	10.4% (5.7 -18.3)	13.3% (10.7 -16.5)	13.6% (10.4 -17.6)	15.4% (12.2 -19.2)	10.4% (6.6 -16.2)	15.3% (8.8 -25.3)	14.2% ¹ (12.8-15.8)
Attempted suicide (one or more times during the 12 months before the survey)	14.8% (7.9 -25.8)	7.7% (5.3 -11.1)	7.7% (5.1 -11.5)	7.8% (5.5-10.8)	8.0% (4.2 -14.6)	13.7% (7.2 -24.4)	9.9% ^{1,2} (8.4 - 11.8)

Confidence Intervals (CI's) of 95% are used to provide statistical markers to gauge real trends versus differences that are more likely to reflect insignificant variation of data from year to year.

¹Duval County statistically different from Florida; ²Duval County statistically different from the United States

⁴Health Zone statistically different from Duval County

Duval County High School Report Card by Health Zone (continued from page 4)

where they reside, from the Duval County YRBS by health zone. YRBS data was compared across Duval County health zones for behavioral risk factors. The health zones do not show much variation from the county rates for these behaviors. Although, there were some differences that were not statistically different. Over 15% of students in Health Zone 2 reported being threatened or injured with a weapon on school property compared to 8.1% in Health Zone 6. Three percent of High School students in Health Zone 6 reported carrying a weapon on school property which was the lowest of all zones compared to 8.5% who reported doing so in Health Zone 2. Almost 15% of those in Health Zone 1 attempted suicide compared to the lowest Zones, Health Zones 2 and 3 where only 7.7% reported the behavior.

Risk Factors	Health Zone 1 2009 95% (CI's)	Health Zone 2 2009 95% (CI's)	Health Zone 3 2009 95% (CI's)	Health Zone 4 2009 95% (CI's)	Health Zone 5 2009 95% (CI's)	Health Zone 6 2009 95% (CI's)	Duval County 2009 95% (CI's)
Safety							
Rarely or never wore a seat belt (when riding in a car driven by someone else)	24.7% ³ (18.0-32.9)	13.2% (10.3 -16.7)	12.5% (9.2 - 16.7)	16.5% (12.7 - 21.2)	16.1% (10.4 - 24.0)	9.1% (4.3-18.3)	16.1% ^{1,2} (14.2 - 18.0)
Rode with a driver who had been drinking alcohol (in a car or other vehicle one or more times during the 30 days before the survey)	32.2% (24.1 - 41.5)	29.1% (25.2 - 33.4)	28.2% (23.0 - 34.1)	29.8% (25.4 - 34.6)	30.1% (24.7 - 36.1)	32.1% (25.2 - 39.8)	30.8% (28.7 - 33.1)
Drove a car or other vehicle when they had been drinking alcohol (one or more times during the 30 days before the survey)	8.2% (3.8 -16.7)	11.3% (8.6 -14.6)	12.4% (8.3 -18.0)	8.2% (5.5 -12.0)	12.0% (8.2-17.3)	13.9% (7.5 -24.6)	11.1% (9.1 - 13.6)

Confidence Intervals (CI's) of 95% are used to provide statistical markers to gauge real trends verses differences that are more likely to reflect insignificant variation of data from year to year.

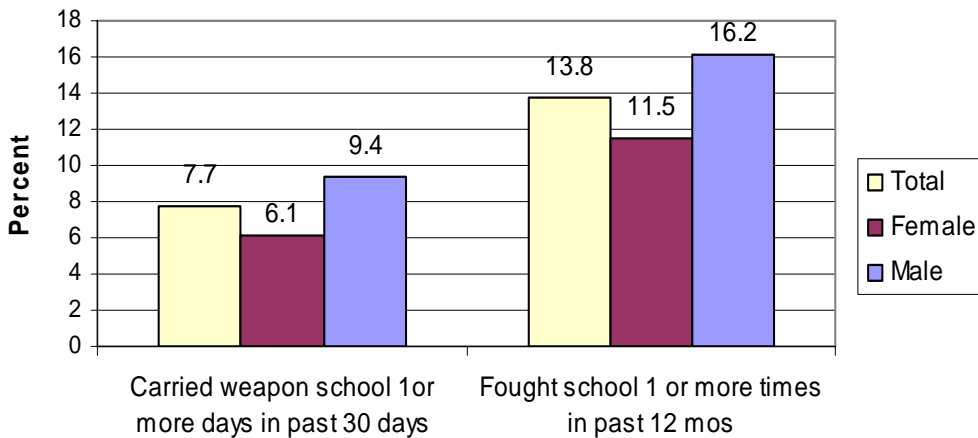
¹Duval County statistically different from Florida; ²Duval County statistically different from the United States

³Health Zone 1 statistically different from Health Zones 2 and 3

Violence

The percentage of males versus females that carry weapons and fight while on school property is not as different as might be popularly thought. There were 9.4% of males that carried a weapon at least once in the last 30 days as opposed to 6.1% of females, with 7.7% overall claiming to have done so. For fighting while on school property, there were 16.2% of males and 11.5% of females claiming to have done so, with 13.8% overall (see Figure 2).

Figure 2 **Percentage of Students Engaging in Violent Behavior**

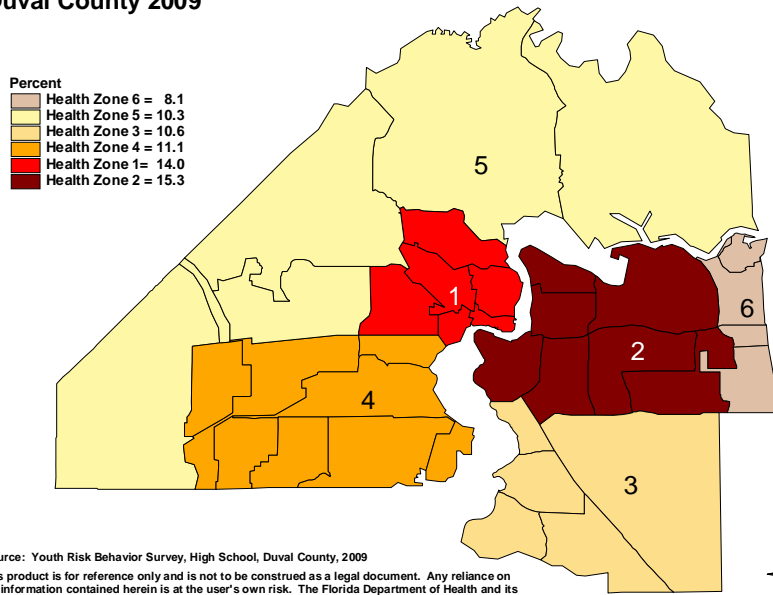


Just over 7% of students carried a weapon to school in the past 30 days

Source: Youth Risk Behavior Survey, Duval County, 2009
 *Data statistically significant

Health Zone 2 had the highest percentage of students who were threatened or injured with a weapon with 15.3% followed closely by Health Zone 1 with 14.0%. Health Zone 6 had the lowest percentage with 8.1% (see Figure 3).

Figure 3 **High School Students Threatened or Injured With a Weapon by Health Zone, Duval County 2009**



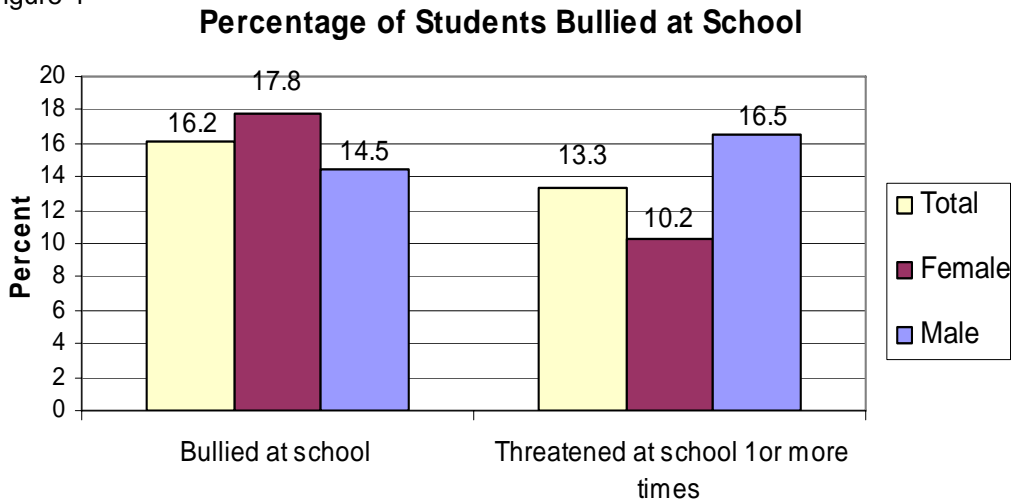
Students residing in Health Zone 2 had the highest percentage of students who were threatened or injured with a weapon

Source: Youth Risk Behavior Survey, High School, Duval County, 2009
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Violence

The issue of bullying and being bullied is one of extreme interest, especially in light of the high rates of violent and intimidation-related behaviors. Figure 4 shows that 16.2% of all Duval County high school students have been bullied at school, with more females than males reporting this experience, 17.8% and 14.5%, respectively. There were 13.3% of students who say they had been threatened at school at least once in the last 12 months. Males, with 16.5% (95% CI=13.8,19.6) experienced this behavior at a significantly higher rate than females with 10.2% (95%CI=8.3,12.5) see Figure 4).

Figure 4



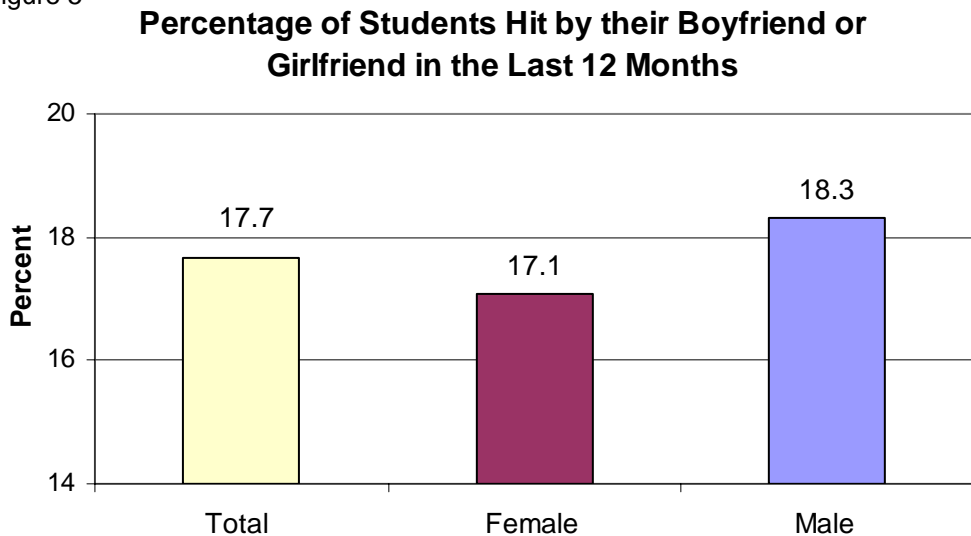
A higher percentage of females are bullied at school than males

Source: Youth Risk Behavior Survey, Duval County, 2009

*Statistically significant difference between and female for *threatened at school*

The high rates of dating violence among males and females is startling as 18.3% of males report having been hit by their significant others, while 17.1% of females report the occurrence. This is similar to the overall rate of 17.7% of high school students reporting having been hit by a person they are dating (see Figure 5).

Figure 5



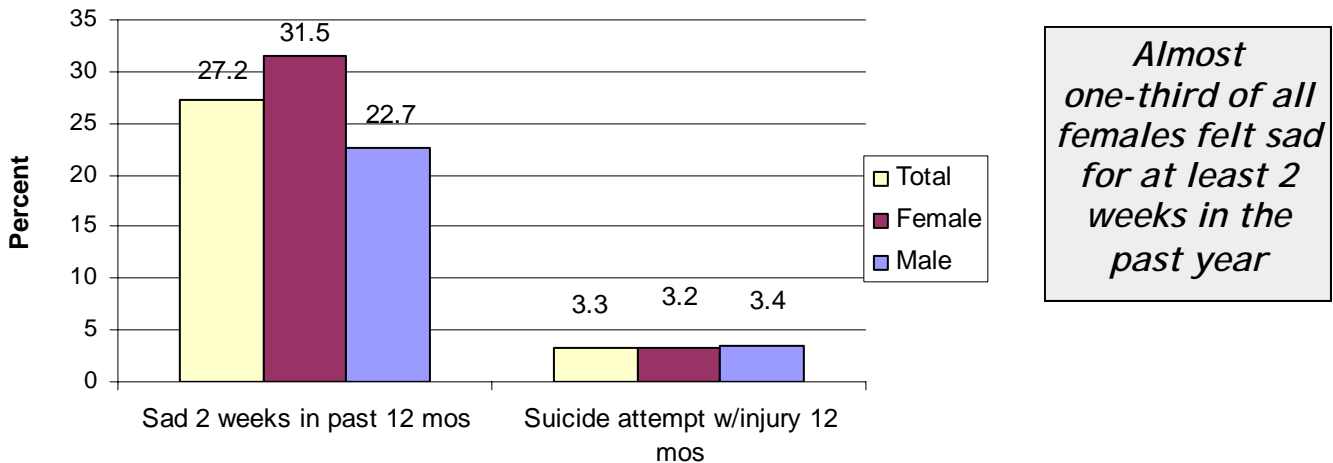
Approximately 18% of students, both male and female, have been hit by their boyfriend or girlfriend

Source: Youth Risk Behavior Survey, Duval County, 2009

Depressive and Suicidal Behaviors

There is high depressive behavior reported by high school students, with 31.5% (95%CI=28.9,34.2) of females and 22.7% (95%CI=20.2,25.3) of males report being sad or down for at least 2 weeks during the past year. This difference is statistically different. With an overall rate of 27.2%, this behavior has far-reaching implications. The number of students who attempted suicide resulting in an injury and requiring medical treatment was low with 3.3% overall, when compared to the rates shown in the report cards for attempted suicide (see Figure 6).

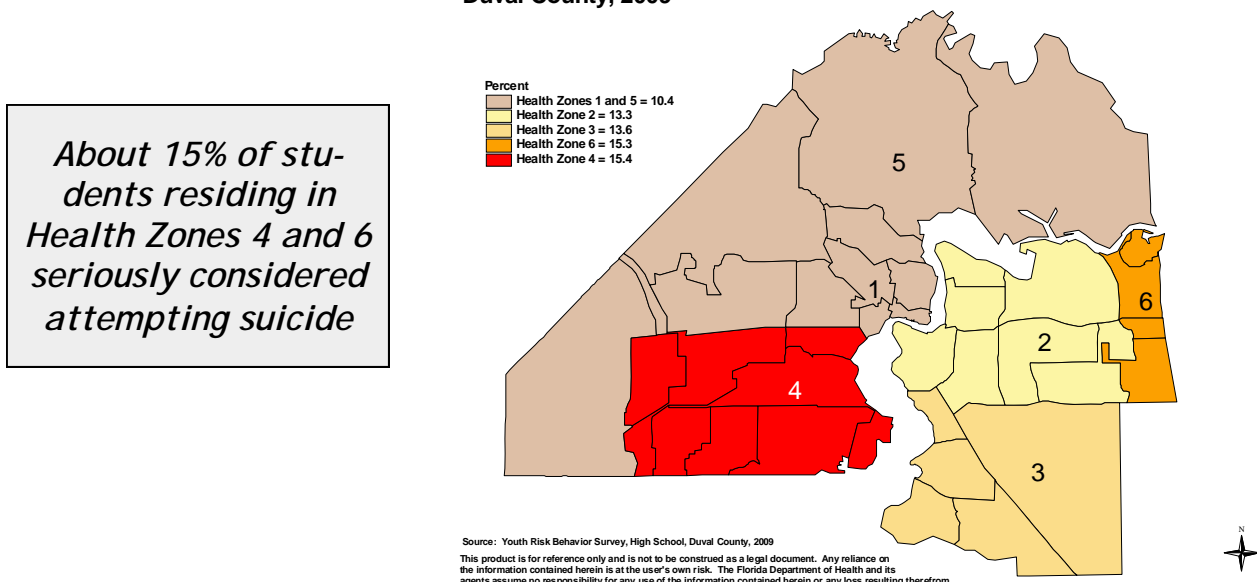
Figure 6 **Percentage of Students with Suicidal and Depressive Behaviors**



Source: Youth Risk Behavior Survey, Duval County, 2009
 *Data statistically significant between gender for *sad in the past 2 weeks*

Health zone percentages for students considering attempting suicide ranged from 7.7 to 14.8 (see Figure 7).

Figure 7 **Seriously Considered Attempting Suicide by Health Zone, Duval County, 2009**

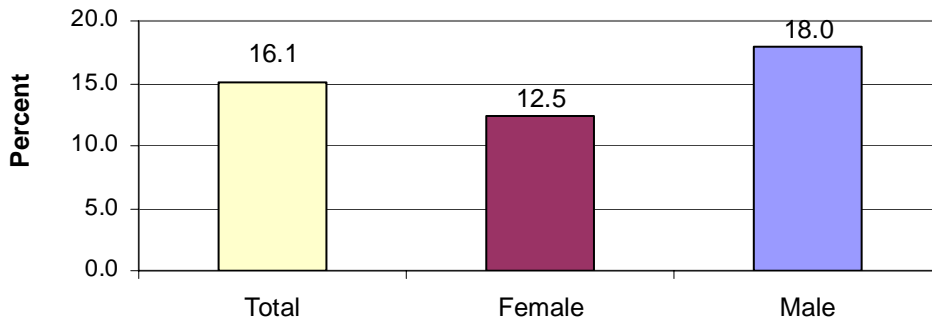


Driving Behaviors

About 15% of students never or rarely wear a seat belt in the car. Males are significantly more likely to not wear a seat belt with 18.0% (95%CI=15.6,20.7) than females with 12.5% (95%CI=10.5,14.7 (see Figure 8)). In addition, students living in Health Zone 1, with 24.7% are significantly more like to never or rarely wear a seatbelt than students in Health Zone 2 and 3. Students living in Health Zone 6 are most likely to wear seatbelts with 9.1% never or rarely wearing a seatbelt (see Figure 10).

Figure 8

Percentage of Students Who Never/Rarely Wear Seat Belts



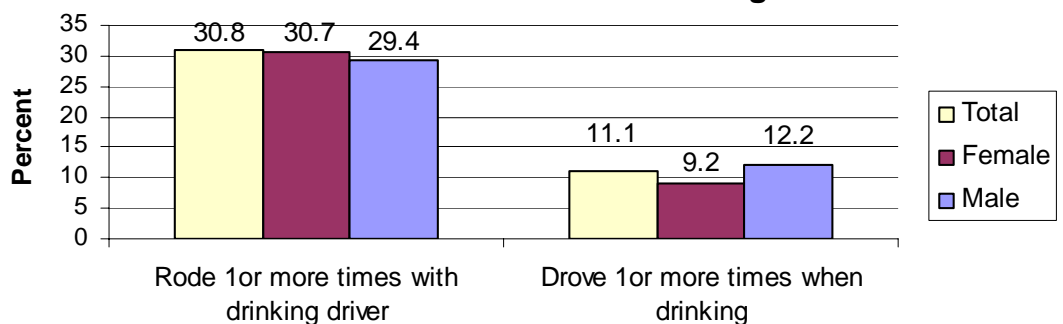
Males are much more likely to never or rarely wear a seatbelt than females

Source: Youth Risk Behavior Survey, Duval County, 2009
Data statistically significant between gender

There were more students in Duval County that rode with drivers who were under the influence than did those students who drove while under the influence. There may be some overlap that is not readily distinguishable; however, with over 11% driving while under the influence of alcohol and over 30% riding in vehicles driven by such drivers, there is concern for the safety of these students, as well as the safety of those unaware of the presence of teenage drivers driving while under the influence of alcohol.

Figure 9

Percentage of Students Who Rode with Drinking Driver or Drove While Drinking



About one-third of students have rode with a driver at least once who had been drinking alcohol

Source: Youth Risk Behavior Survey, Duval County, 2009

Summary

Overall, there are many areas of concern when it comes to the safety and prevention of violence among the high school student population. The presence of these behaviors should be a blaring wake up call to the public health and education communities, as well as the community of Jacksonville at large. The prevention of many of these behaviors from occurring is possible and methods and policies should be scrutinized for lapses in their attempts at prevention. One of the more blaring results reported is the over 18% of high school students in Health Zone 6 that have attempted suicide. As seen throughout this report, Duval County has a lot of ground between itself and the state of Florida and even the rest of the country for the presence of these risky behaviors among its youth.

Data Collection Methods

Description of the YRBS

The Youth Risk Behavior Survey (YRBS) is a self-administered, school-based, confidential, and anonymous survey that was conducted in the Duval County Public Schools in the spring of 2009. In Florida, weighted YRBS data has been collected at the state level every two years since 2001. Five Florida counties (Orange, Hillsborough, Palm Beach, Broward, and Miami-Dade) are funded by the CDC to collect county-level data. In the spring of 2009, Duval County, for the first time, received federal funding by the CDC to administer a specific county-level YRBS even though it has been included in the state-level data collection in the past. The YRBS is part of a national effort by the CDC to obtain information pertaining to social behaviors. These behaviors include, but are not limited to: violence, safety, sex, nutrition and weight management, suicide, and more. In the 19 public high schools in Duval County, there were 2,542 students who participated. Initial county-level analysis was performed by Westat, a CDC contractor. Sub-county analysis was conducted through a joint effort by the Duval County Public Schools and the Duval County Health Department. A stratified analysis according to the six defined health zones was conducted to identify the risk for these behaviors at the sub-county level. This sub-county analysis allows Duval County to be unique in its ability to identify geographically, within its community, those groups at risk.

Data Collection Methods

Nationally, schools are selected with probability proportional to the size of student enrollment in grades 9 - 12. Then, required classes are randomly selected to participate within selected schools with equal probability. The questionnaire is administered to all students in sampled classes in sampled schools. However, in Duval County, all schools were included in the study with the classes randomly selected, which resulted in the students being randomly selected. This ensures the reliability and validity of the sample to be a randomly generated one, which is important to the statistical process behind the administration of surveys and their analysis. Within selected classes, students are eligible to participate voluntarily, anonymously, and confidentially. Parental notification was provided. Survey administrators were Duval County Public Schools classroom instructors and were trained as to the appropriate method of administering and collecting the surveys. These precautions were necessary in order to ensure the complete privacy of the students.

The CDC states "Weighted results means that the survey got an overall response rate of at least 60%. Weighted results are representative of all students in grades 9 - 12 attending public schools in each jurisdiction. With weighted data, it is possible to say, for example, 'X% of students in state Y never or rarely wore a seat belt when riding in a car driven by someone else.'" This means that a weight has been associated with each questionnaire to reflect the likelihood of sampling each student and to reduce bias by compensating for differing patterns of non-response. The objective of the weighting process is to develop sample weights that can be employed during analysis to generate results that accurately represent the entire student population in the county. The weighted results can be used to make important inferences concerning the priority health-risk behaviors of all regular public school students in grades 9 through 12.

References

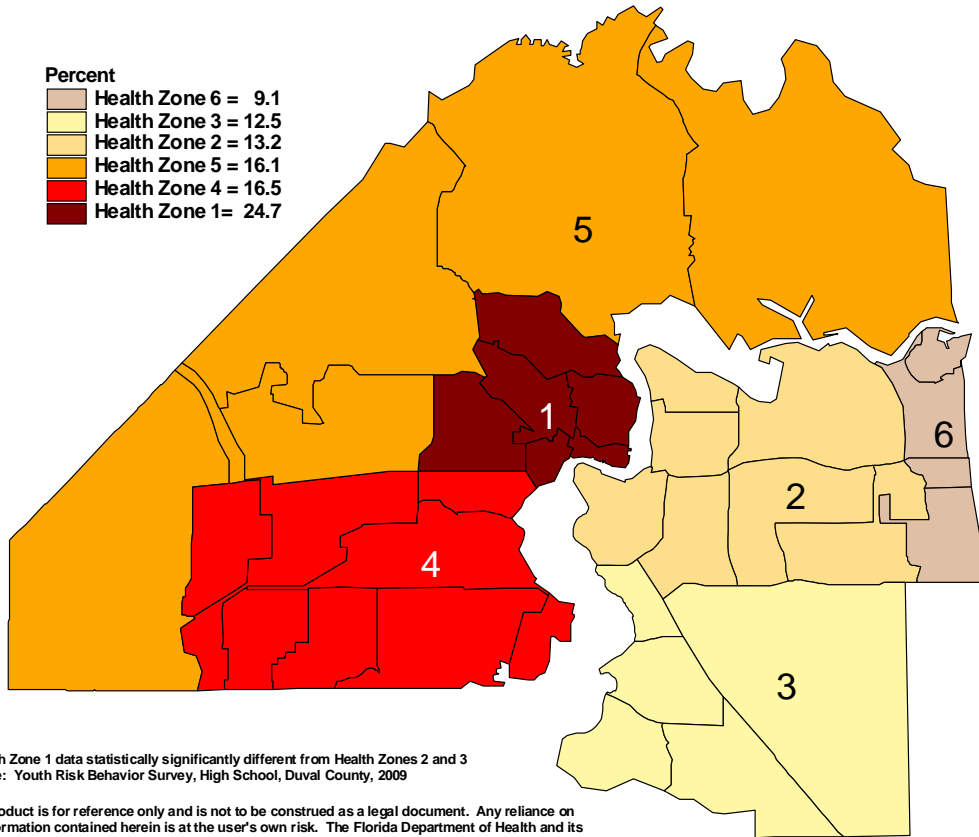
¹Healthy People 2010, Leading Health Indicators, http://www.healthypeople.gov/Document/HTML/uih/uih_4.htm

²<http://www.cdc.gov/healthyyouth/adolescenthealth/index.htm>

³Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. Improving the

Figure 11

Rarely or Never Wore a Seat Belt by Health Zone, Duval County, 2009



For more information, contact:
www.duvalschools.org/yrbs