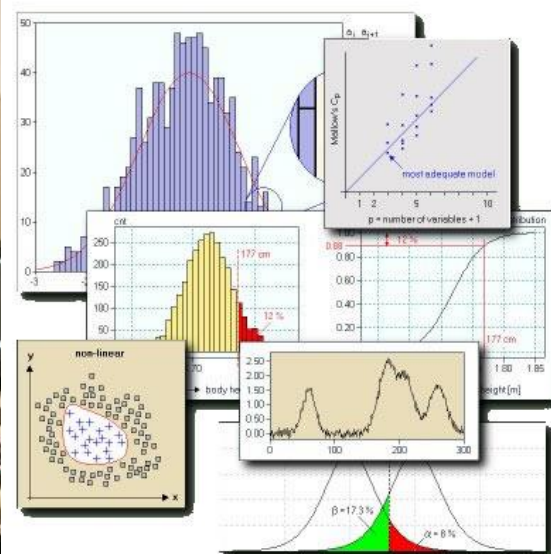




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Virginia I-Base Survey Analysis Report

January 16, 2015

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Acknowledgements

Market Decisions thanks the twenty-one Virginia high schools and the 3,537 high school students who participated in the 2011-12 Virginia I-Base survey. Without this survey response data, this analysis would not be possible.

We thank Jeff Jordan, President and Executive Creative Director, and the leadership at Rescue Social Change Group for developing the I-Base survey and allowing Market Decisions and the Virginia Foundation for Healthy Youth to use the instrument for data collection for this report. We are not aware of any similar large-scale administration of the I-Base survey in any other state. The rich data collected provides a scientific basis for marketing tobacco cessation and prevention messages to peer crowds.

Finally, we also thank Danny Saggese, Director of Marketing, and the Senior Leadership at the Virginia Foundation of Healthy Youth for support of the initial administration of the Virginia I-Base Survey.

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Methodology

This report provides the results of the Virginia I-Base survey conducted in 2011 and 2012 among youth in Virginia. The I-Base survey is a proprietary survey questionnaire developed by the Rescue Social Change Group (RSCG). Market Decisions collected data from high school students in Virginia using the I-Base survey under the direction of RSCG and the Virginia Foundation for Healthy Youth (VFHY).

Research Objectives

The objectives of this study were to understand:

- 1) How youth associate with different peer crowds, and
- 2) Which peer crowds have higher rates of tobacco use, so that tobacco cessation and intervention strategies aimed at teens can effectively target these populations.

Survey Instrument

Market Decisions collected data from high school students in Virginia by using the I-Base survey questionnaire, as developed by RSCG. The survey examines students' peer group affiliations, social behaviors, awareness and opinions of youth anti-smoking campaigns, and tobacco-related attitudes, perceptions, and behaviors.

Sampling and Data Collection

This administration of the survey was logistically complex and methodologically rigorous. Participating schools were selected using a carefully designed sampling protocol. A paper survey was administered to high school juniors and seniors statewide and took approximately 15 to 25 minutes to complete. Completed surveys were mailed back to Market Decisions for scanning and analysis. Data collection procedures are detailed in the Appendix.

A total of 3,537 surveys were completed, with 754 from the VFHY Southeast region, 818 from the Southwest region, 1,013 from the Northern region, and 952 from the Central region. The response rates for the survey are provided below. The data were weighted to reflect the actual population of junior and senior high school students derived from the most recent estimates from the Virginia Department of Education website with respect to region, race/ethnicity, gender, and grade.

Table 1. Response rates by school and students.

Region	School Response Rate	Student Response Rate
Statewide	19%	81%
Southeast	20%	75%
Southwest	26%	86%
Northern	14%	82%
Central	17%	83%

Data Analysis

Analysis for this report consisted of frequency counts, descriptives (means), and cross tabulations. All analyses were weighted using the final analytical weight. A detailed description of the weighting process can be found in the Appendix.

Data for this analysis comes from the I-Base survey, which included questions concerning socialization norms and behaviors, demographics, awareness and opinions of youth anti-smoking campaigns, as well as tobacco-related attitudes, perceptions, and behaviors. Responses to the socialization norms and behaviors questions (13 total) were used to develop a “social concern” construct variable. It measures the extent to which respondents are aware of their social persona or image and their inclination to act in certain ways in order to maintain this persona or image. Demographic measures consisted of age, grade level, gender, race, and ethnicity. Respondents were also asked if they were aware of, and whether they liked, the “youthink” campaign. Finally, the survey concluded with a battery of questions concerning agreement with anti-tobacco sentiments, perceptions of tobacco use among peers, and self-reported tobacco use behaviors.

The I-Base survey also includes a picture sort exercise that is used to determine which peer crowds a respondent associates with. For the picture sort exercise, youth were presented with two-sets of 30 images (60 total) of teenagers and then asked to identify three individuals they would hang out with and three individuals they would not hang out with.

Based on the picture sort results, respondents were categorized as associating with one of five different peer crowds: Preppy, Alternative, Mainstream, Hip Hop, or Country. This involved the use of a formula, provided by RSCG, to score responses in order to assign respondents to peer crowds. For this analysis, respondents must have scored **a minimum of three (3) points** with a peer crowd to be considered to have any association with any given crowd. A sixth group (indeterminate) was subsequently created for this “any association” variable because not all respondents scored a minimum of three points with any crowd. Additionally, a “primary association” peer crowd variable was created by determining the single peer crowd with which respondents had the highest score. An “indeterminate” category was also created for this variable as some respondents had tie top scores. Except where noted, the tabulation of responses for this report was conducted by the “any association” peer crowd variable.

In this report, the term “associate” is used exclusively to describe the relationship between *respondents* and *peer crowds*, as determined by the picture sort exercise and the RSCG peer crowd coding formula. In order to describe the relationship between *peer crowds*, the word “influence” is used exclusively. For this report, “influence” suggests that the effects (i.e., tobacco use) of associating with one crowd are *influenced* by association with another crowd.

Discussion

Peer Crowd Associations

This study analyzed smoking attitudes and behaviors by groups of youth with similar cultural norms. These groups are known as *peer crowds*.

In the survey, youth were presented with two sets of 30 images of youth dressed and posed in styles appropriate to specific peer crowds. From each set they selected the images of youth that they would be most likely to hang out with. Points were assigned to each image selected (three points for first, two points for second, and one for third). These points were used to associate youth with a peer crowd in two ways:

- 1) **Primary association:** based on the peer crowd images which respondents selected most often with a minimum score of three (3) points for the peer crowd.
- 2) **Any association:** includes any peer crowds images the respondent scored a minimum of three (3) points with any of the five crowds.

The “primary association” variable is mutually exclusive and assigned a single crowd to each respondent. The “any association” variable is **not** mutually exclusive as respondents could have *any* association with more than one peer crowd. Based on this approach, half of all youth associated with only one peer crowd. Another half associated with some combination of peer crowds, with one peer crowd dominating.

The largest peer crowd, in terms of *primary* association, was Preppy with 18.0% of Virginia youth. Other peer crowds, in terms of *primary* association, were half the size of the Preppy crowd or less.

Preppy was also the largest peer crowd in terms of *any* association, with 53.5% of youth, followed by Mainstream with 35.2%. These two crowds are grouped together for reporting as approximately 89% of all respondents had *any* association with either Preppy or Mainstream. Youth in these groups also tended to have similar tobacco behaviors and attitudes.

Alternative, Country, and Hip Hop are also combined in this report. While each of these groups is small in terms of *primary* association, almost half (49.6%) of Virginia youth have *any* association with these peer crowds.

Types of Tobacco Use by Peer Crowd

Cigarette smoking was most prevalent among Alternative youth, cigarillo smoking was most prevalent among Hip Hop youth, and smokeless chewing tobacco use was most prevalent among Country youth.

Rates of Tobacco Use by Peer Crowd

Any tobacco use was highest among youth who associated with Hip Hop and Alternative, followed those who associated with by Country.

Youth who associated with Hip Hop and/or Country, as well as Alternative, were most inclined to say they would smoke in the next year or do not plan to stop smoking.

Mainstream youth consistently had the lowest rates of any tobacco use. Rates of any tobacco use were slightly higher.

Mainstream youth, and to a lesser extent Preppy youth, were more likely than other respondents to say they would not smoke in the next year and plan to stop smoking in the next year.

Multiple Peer Crowd Influences and Tobacco Use

Tobacco use rates were highest among youth who associated with any combination of crowds that included Hip Hop, Alternative, and Country. While these three groups accounted for half of youth, they accounted for two-thirds (65%) of smokers.

Association with Hip Hop had the strongest relationship with tobacco use. Whatever peer crowd a youth associated with, they were more likely to use any tobacco if they also associated with Hip Hop. Youth who associated with Alternative, Country, and some combination including these two peer crowds were also more likely to use any tobacco but the influence of Hip Hop was the strongest. Association with Country increased the likelihood of youth using smokeless tobacco.

Conversely, Preppy and Mainstream appeared to have a protective influence, as youth who associated with any peer crowd and either Preppy or Mainstream were less likely to use any tobacco.

Tobacco Perceptions and Attitudes

Hip Hop youth were consistently more likely to say that smoking was increasing or common among peers at popular hangouts. Alternative and Country youth were also generally more likely to perceive that smoking is increasing and common among peers. Mainstream youth tended to say that smoking is decreasing and less common among peers. Perceptions of tobacco use among Preppy youth reflected perceptions of respondents overall.

Attitudes towards tobacco and tobacco use differed between two groups of peer crowds,

- a) Preppy and Mainstream, and
- b) Alternative, Country, and Hip Hop.

Preppy and Mainstream youth were generally *more* likely to hold anti-tobacco attitudes. Alternative, Country, and Hip Hop youth were generally *less* likely to hold anti-tobacco attitudes.

Brand and Campaign Awareness

Awareness of ydouthink was greatest among Alternative and Mainstream youth. As for the “Can Anybody Tell Us Why Smoking Isn’t Stupid” campaign, Preppy and Mainstream youth were more likely to have positive impressions and say the campaign was believable or cool. Hip Hop and Alternative youth were more likely to have negative impressions of the campaign.

Peer Crowd Characteristics

Country had the greatest proportion of respondents who said they were white, followed by Preppy, Alternative, and Mainstream. Hip Hop was the only crowd to have more black respondents than white respondents associating with the crowd.

Females tended to be more likely to associate with Preppy or Mainstream, and males tended to be more likely to associate with Hip Hop or Country. Alternative was split equally between males and females.

For Preppy, Alternative, Mainstream, and Country, respondents were more likely to be in the Northern region than any other region. Hip Hop youth tended to be in the Southeast region.

Social Concern

Social concern is a domain developed by Rescue Social Change Group and is measured on the I-Base survey with 13 separate questions. Responses to these questions were recoded and then added together to create a summative scale of social concern scores ($M = 7.23$, $SD = 3.44$, range 0-17). A categorical social concern variable was computed from this scale, with low (0-5), medium (6-11), and high (12-17) social concern categories.

Based on these categories, Hip Hop youth generally had the highest levels of social concern, while Mainstream youth, in general, had the lowest levels. Alternative, Country, and Preppy all tended to have more moderate levels of social concern.

Key Findings

Peer Crowd Associations

- More youth associated with Preppy than any other peer crowd, but Hip Hop was consistently the smallest peer crowd.
- Preppy had the greatest influence on youth who associated with more than one peer crowd, but the strongest interaction was between Preppy and Mainstream.
- Although more youth had *any* association with Hip Hop, Alternative, or Country, more youth *primarily* associated with either Preppy or Mainstream.
- Almost half of all respondents (49.6%) associated with Hip Hop, Alternative, Country, or some combination including these three peer crowds.
- Less than 40% of respondents (37.9%) associated with Alternative, Country, or some combination including these two peer crowds.

Rates of Tobacco Use by Peer Crowd

- Mainstream youth consistently had the lowest rates of tobacco use.
- Alternative youth had the highest rates of cigarette smoking, Hip Hop youth had the highest rates of cigarillo smoking, and Country youth had the highest rates of smokeless tobacco use.
- Mainstream youth were most likely to say they would not smoke in the next year, whereas Hip Hop youth were most likely to say they would smoke.
- Mainstream and Preppy youth were more likely than Alternative, Country, or Hip Hop youth to say that they expect to stop smoking sometime in the next year.

Multiple Peer Crowd Influences and Tobacco Use

- The highest rates of tobacco use were among youth who associated with some combination of crowds that included Alternative, Hip Hop, and/or Country.
- Smokeless tobacco (dip, chew, or snuff) use was highest among Country youth or youth who associated with a peer crowd combination that included Country.
- Association with any peer crowd and Hip Hop, and to a lesser extent Country or Alternative, was consistently related to a greater proportion of youth using any tobacco.
- Youth were less likely to use any tobacco if they associated with any peer crowd and either Mainstream or Preppy.

Tobacco Perceptions and Attitudes

- Hip Hop, Country, and Alternative youth perceived tobacco use as more prevalent while Mainstream youth perceived it as less prevalent.
- Perceived tobacco use among the most social and well-known people was greatest among Hip Hop youth.
- Nearly half of youth who associated with Hip Hop, Country, or Alternative agreed that people smoke cigarettes to feel comfortable in social situations.
- Mainstream and Preppy youth were more likely than Country, Hip Hop, or Alternative youth to say they wanted to be involved in efforts to get rid of smoking and that taking a stand against tobacco is important.

Brand and Campaign Awareness

- The greatest awareness of *ydouthink* was among Alternative and Mainstream youth, while the greatest awareness of *Ridder* was among Hip Hop youth.
- Mainstream and Preppy youth were most likely to say they had a positive impression of the “Can Anybody Tell Us Why Smoking Isn’t Stupid” campaign. Hip Hop and Alternative youth were most likely to have negative impressions.
- Alternative and Mainstream youth were most likely to say they would be best or good friends with *ydouthink*, but Hip Hop and Country youth were most likely to say they would not be friends.

Peer Crowd Characteristics

- The peer crowd with the highest levels of social concern was Hip Hop. Mainstream generally had the lowest levels of social concern.
- Just over half of respondents who associated with Preppy were white, and another quarter were black. Preppy youth were also slightly more likely to be female.
- Most respondents who associated with Alternative were white, though a quarter were either Hispanic or black. Alternative youth were almost split evenly between males and females.
- Most respondents who associated with Mainstream were white and female. However, nearly one-fifth were black and one-tenth Hispanic.
- More than half of respondents who associated with Hip Hop were black, but more than a quarter were white. Hip Hop youth also tended to be male rather than female.
- Respondents who associated with Country were overwhelmingly white. Males were also more likely than females to associate with Country.

Peer Crowd Associations

About half of all youth (49%) associate with just one peer crowd, with the largest group (18%) associating with Preppy. Other youth associated with various combinations of peer crowds. The largest of these was the combination of Preppy and Mainstream (18.9%).

Six percent (6%) of respondents were not influenced by any crowd because they did not score a minimum of 3 points with any peer crowd.

Table 2. Peer crowd associations and combinations frequencies.

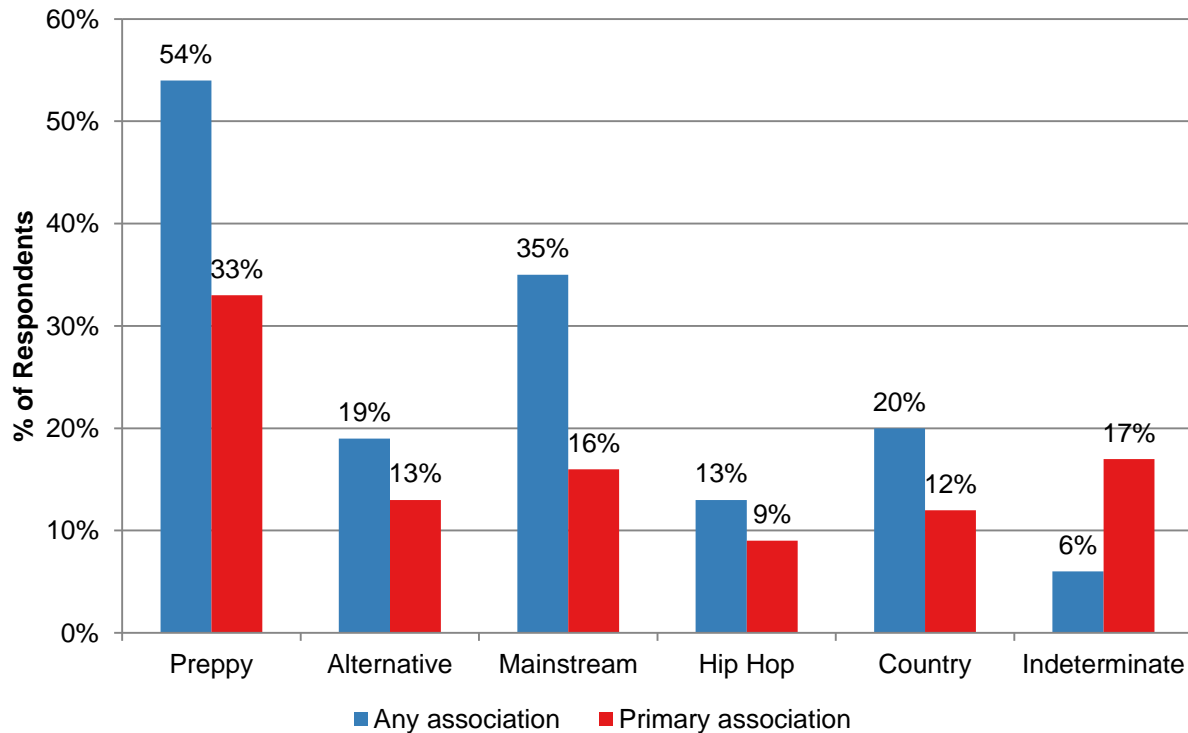
Peer Crowd Combination	%	Count
Preppy and Mainstream	18.9%	34,101
Preppy only	18.0%	32,365
Alternative only	9.4%	16,932
Country only	8.5%	15,235
Mainstream only	7.3%	13,204
No Dominant Influence	6.2%	11,239
Hip Hop only	6.2%	11,232
Preppy and Country	6.1%	10,998
Preppy and Hip Hop	4.5%	8,051
Preppy and Alternative	3.2%	5,835
Alternative and Mainstream	3.0%	5,388
Mainstream and Country	2.5%	4,477
Preppy, Mainstream, and Country	1.4%	2,532
Alternative and Country	1.4%	2,463
Alternative and Hip Hop	0.9%	1,539
Preppy, Alternative and Mainstream	0.9%	1,533
Mainstream and Hip Hop	0.6%	1,116
Mainstream, Hip Hop, and Preppy	0.4%	764
Hip Hop and Country	0.4%	737
Alternative, Mainstream and Country	0.1%	215
Preppy, Alternative and Country	0.1%	151
Alternative, Mainstream and Hip Hop	0.0%	70
Preppy, Alternative and Hip Hop	0.0%	30
Total	100.0%	180,207

Primary and Any Peer Crowd Association

More than half of all respondents (54%) had *any* association with Preppy, while 35% had *any* association with Mainstream. Preppy was also the largest crowd in terms of *primary* influence, with 33% of all respondents primarily associating with Preppy.

Six percent (6%) of respondents did not score a minimum of 3 points with any peer crowd and therefore were coded as “indeterminate.” Similarly, 17% of respondents did not have a *primary* association peer crowd because they had a tie score for two or more different peer crowds.

Figure 1. Any association versus top association peer crowd sizes.



Hip Hop, Country and Alternative Peer Crowd Association

About half of all youth (49.6%) in Virginia associate with Alternative, Country, or Hip Hop, or some combination that includes these three crowds. Less than 40% of youth in Virginia associate with Alternative or Country, or some crowd combination that includes these two crowds.

Table 3. Alternative, Country, and Hip Hop peer crowd combination frequencies.

Peer Crowd Combination	%	Count
Alternative only	9.4%	16,932
Country only	8.5%	15,235
Hip Hop only	6.2%	11,232
Preppy and Country	6.1%	10,998
Preppy and Hip Hop	4.5%	8,051
Preppy and Alternative	3.2%	5,835
Alternative and Mainstream	3.0%	5,388
Mainstream and Country	2.5%	4,477
Preppy, Mainstream, and Country	1.4%	2,532
Alternative and Country	1.4%	2,463
Alternative and Hip Hop	0.9%	1,539
Preppy, Alternative and Mainstream	0.9%	1,533
Mainstream and Hip Hop	0.6%	1,116
Mainstream, Hip Hop, and Preppy	0.4%	764
Hip Hop and Country	0.4%	737
Alternative, Mainstream and Country	0.1%	215
Preppy, Alternative and Country	0.1%	151
Alternative, Mainstream and Hip Hop	0.0%	70
Preppy, Alternative and Hip Hop	0.0%	30
Total	49.6%	89,298

Overlapping Peer Crowd Associations

Respondents who associated with more than one crowd were most likely to associate with Preppy and one other crowd.

The percentage of youth who associated with one crowd and were influenced by another varied depending on the specific peer crowd combination.

Preppy youth were most likely to also be influenced by Mainstream, and Mainstream youth were most likely to also be influenced by Preppy. Youth who associated with Alternative, Hip Hop, or Country were all most likely to also be influenced by Preppy.

Table 4. Peer crowd crosstabulation.

	Any Association Peer Crowd									
	Preppy		Alternative		Mainstream		Hip Hop		Country	
	%	Count	%	Count	%	Count	%	Count	%	Count
Influenced by Preppy	n/a	n/a	22%	7,550	61%	38,931	38%	8,846	37%	13,681
Influenced by Alternative	8%	7,550	n/a	n/a	11%	7,205	7%	1,639	8%	2,828
Influenced by Mainstream	40%	38,931	21%	7,205	n/a	n/a	8%	1,950	20%	7,223
Influenced by Hip Hop	9%	8,846	5%	1,639	3%	1,950	n/a	n/a	2%	737
Influenced by Country	14%	13,681	8%	2,828	11%	7,223	3%	737	n/a	n/a

Note: Percentages correspond to columns, or the percent of respondents who associate with one crowd and are influenced by another (minimum score of 3).

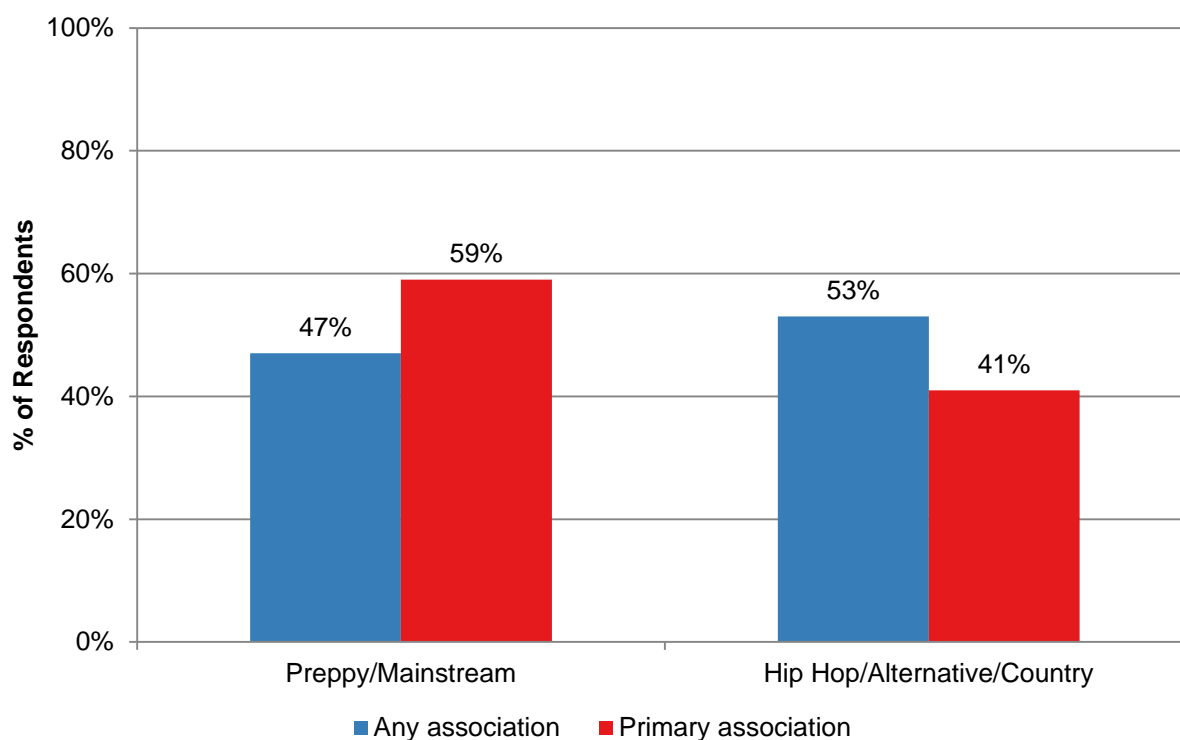
Preppy/Mainstream vs. Hip Hop/Country/Alternative Association

Slightly more youth had *any* association with Hip Hop, Alternative, and/or Country, but more youth *primarily* associated with Preppy and/or Mainstream.

As a reminder, peer crowd association was calculated in two different ways:

- 1) **Primary association:** based on the peer crowd images which respondents selected most often with a minimum score of three (3) points for the peer crowd.
- 2) **Any association:** includes any peer crowds images the respondent scored a minimum of three (3) points with any of the five crowds.

Figure 2. Preppy/Mainstream and Hip Hop/Alternative/Country comparison.



Rates of Tobacco Use by Peer Crowd Association

Hip Hop, Alternative, or Country youth were more likely to use tobacco, whereas Preppy or Mainstream youth were less likely to use tobacco.

Youth associated with Alternative had the highest rates of **cigarette** use, while youth associated with Hip Hop had the highest rates of **cigarillo** use and youth associated with Country had the highest rates of **smokeless** tobacco use. The highest rates of **any tobacco use** were among youth influenced by either Hip Hop or Country.

Table 5. Tobacco use by peer crowd association.

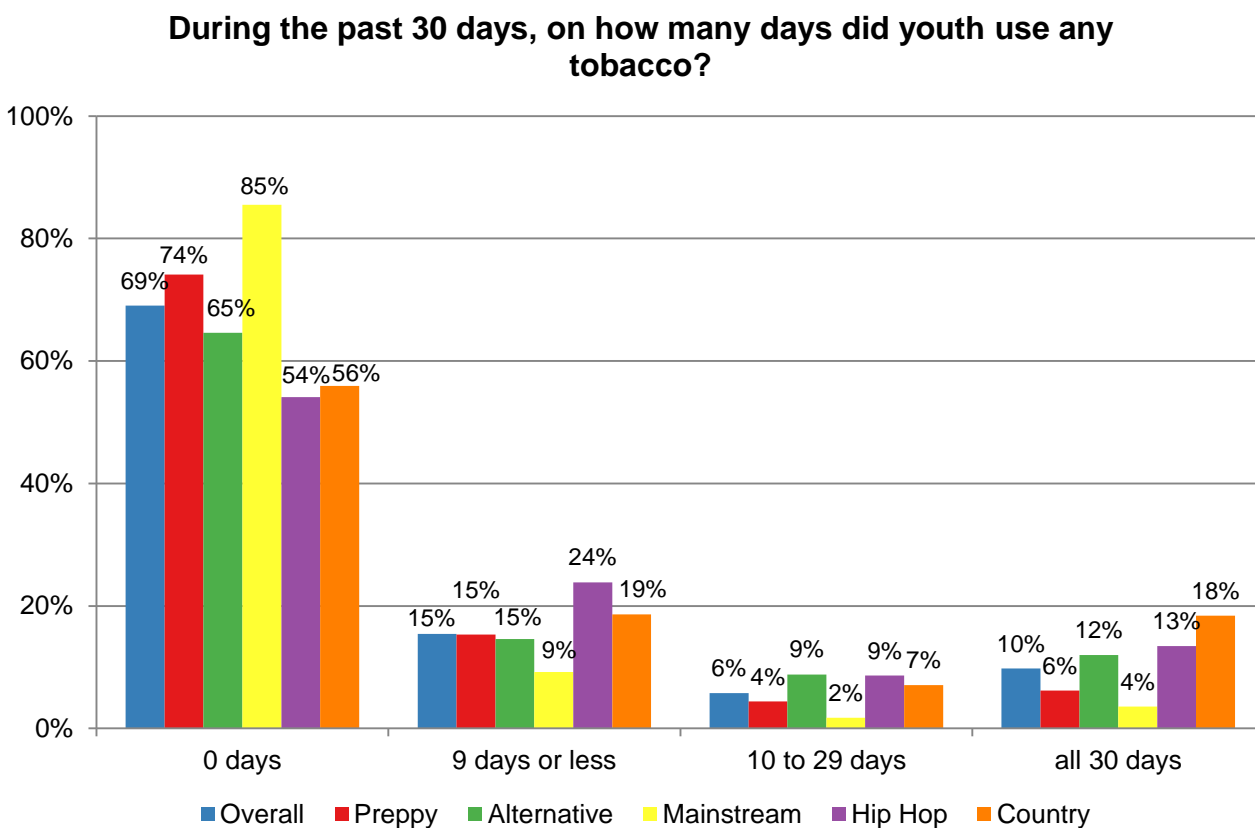
		Smoked cigarettes in past 30 days		Smoked cigarillos in last 30 days		Used dip or chew in last 30 days		Used any tobacco in last 30 days	
		%	Count	%	Count	%	Count	%	Count
Preppy	<i>Not Associated</i>	26%	22,023	20%	16,686	14%	12,076	36%	30,379
	<i>Associated</i>	15%	14,323	15%	14,119	7%	6,974	26%	24,743
Alternative	<i>Not Associated</i>	18%	26,190	17%	24,831	11%	15,994	30%	43,129
	<i>Associated</i>	30%	10,156	17%	5,974	9%	3,056	35%	11,993
Mainstream	<i>Not Associated</i>	26%	30,353	22%	26,128	14%	16,281	39%	45,977
	<i>Associated</i>	9%	5,993	7%	4,677	4%	2,770	14%	9,146
Hip Hop	<i>Not Associated</i>	19%	30,499	14%	22,046	11%	16,847	28%	44,475
	<i>Associated</i>	25%	5,847	37%	8,759	9%	2,204	45%	10,647
Country	<i>Not Associated</i>	18%	26,021	17%	24,562	7%	9,551	27%	39,105
	<i>Associated</i>	28%	10,325	17%	6,243	26%	9,500	44%	16,017

Note: Percentages correspond to rows, or the percent of respondents who use tobacco and are not associated with a peer crowd compared to the percent of respondents who use tobacco and are associated with a peer crowd.

Rates of Any Tobacco Use by Peer Crowd Association

Mainstream youth were most likely to **not** use any tobacco, Hip Hop youth were most likely to use **any tobacco** for 9 days or less, and Country youth were most likely to use any tobacco for all 30 days.

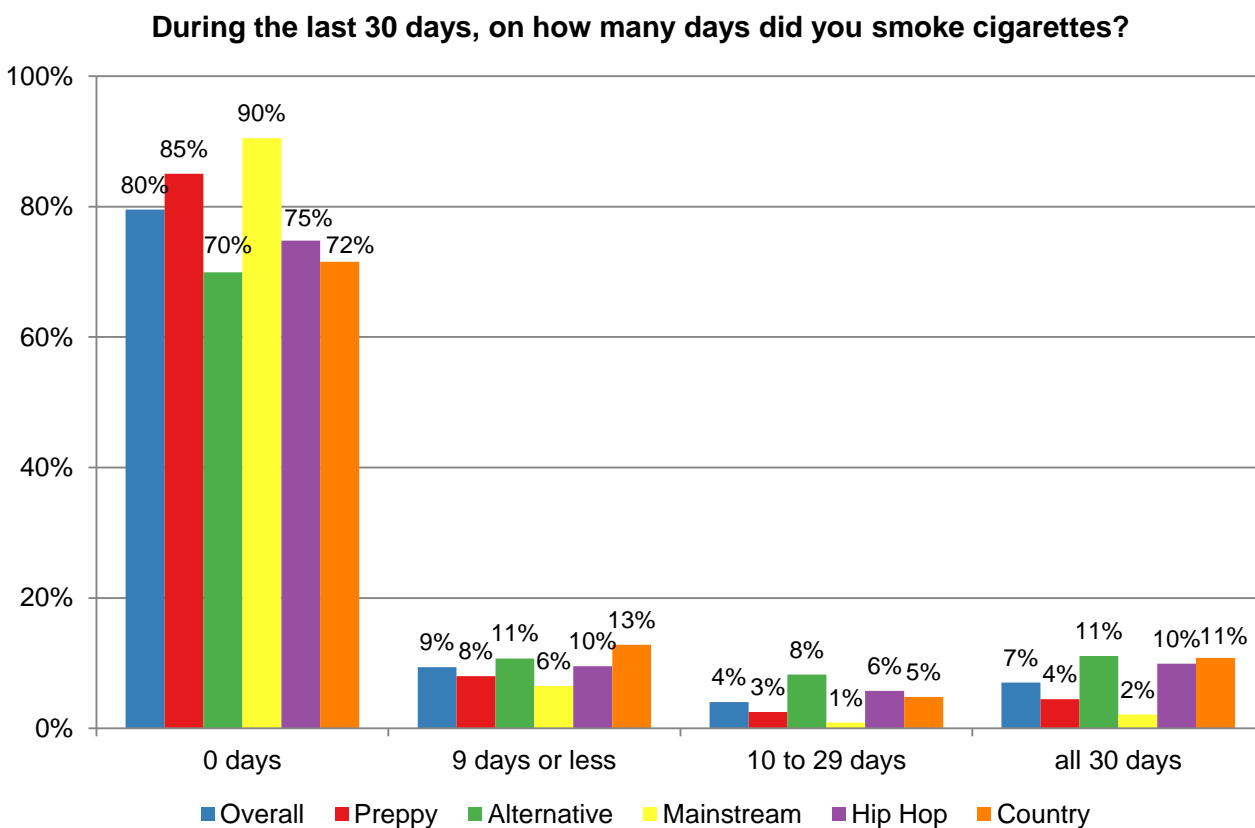
Figure 3. Rates of any tobacco use by peer crowd.



Rates of Cigarette Smoking by Peer Crowd Association

Mainstream and Preppy youth were *least* likely to smoke **cigarettes**. Alternative youth were *most* likely to smoke cigarettes, followed by Country and then Hip Hop.

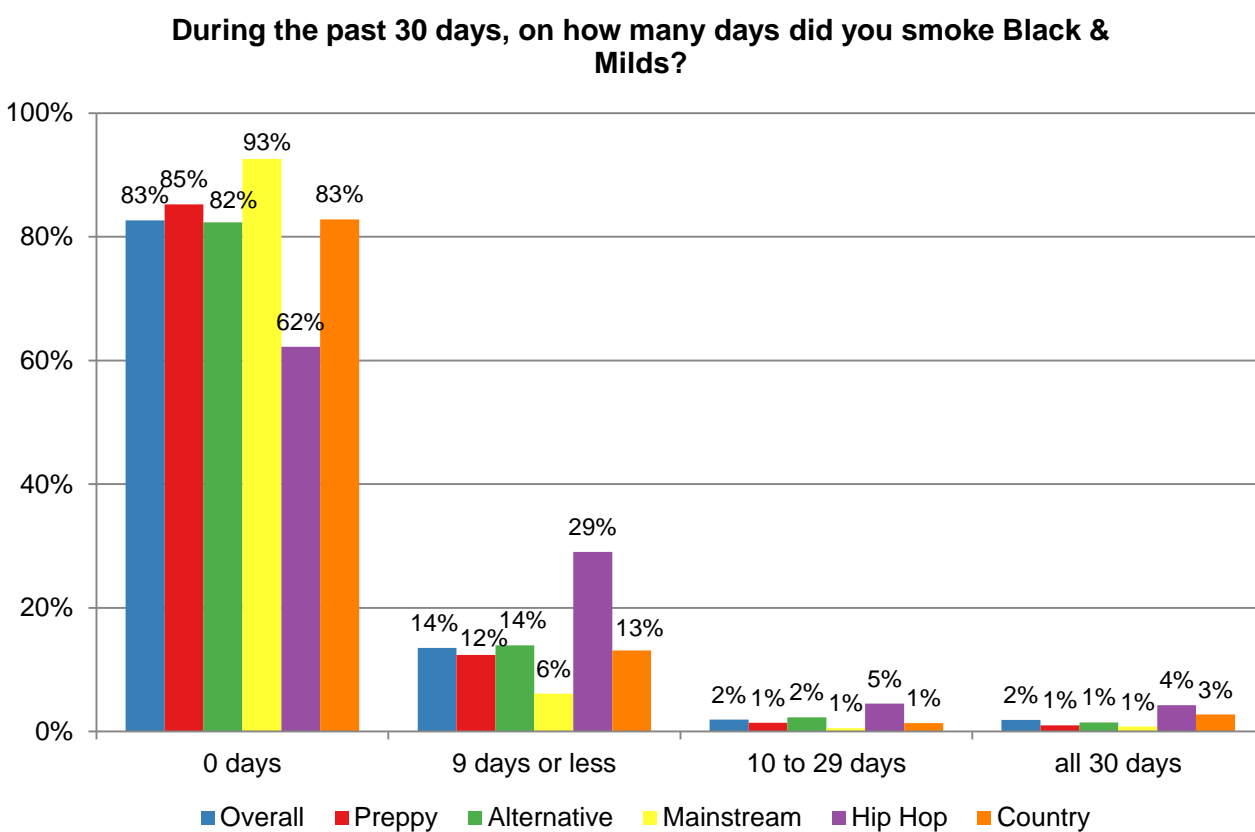
Figure 4. Cigarette smoking rates by peer crowd.



Rates of Black & Mild Smoking by Peer Crowd Association

Although most youth did not smoke **Black & Milds**, 38% of Hip Hop youth said they smoked Black & Milds, with 29% saying 9 days or less

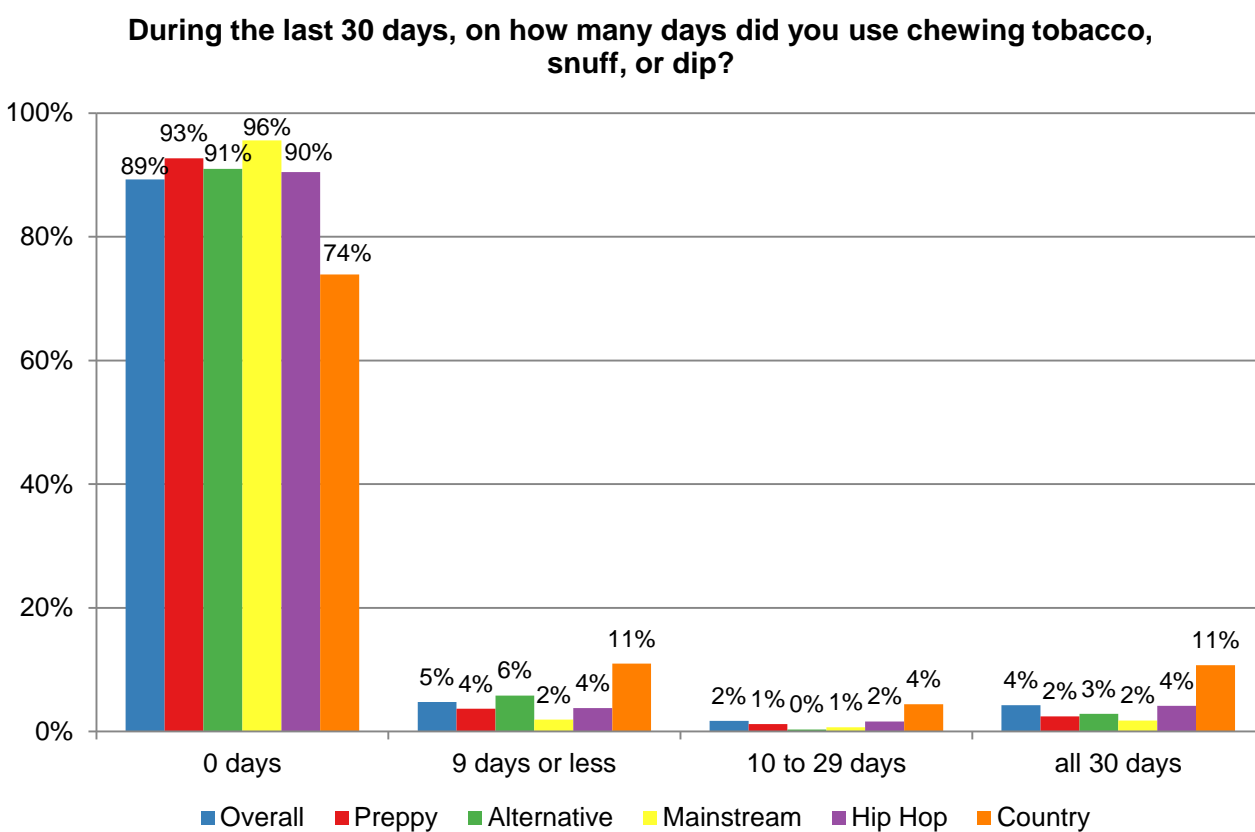
Figure 5. Cigarillo smoking rates by peer crowd.



Rates of Smokeless Tobacco Use by Peer Crowd Association

The majority of youth did not use **chew, snuff, or dip**, but 26% of Country youth used smokeless tobacco for at least one day.

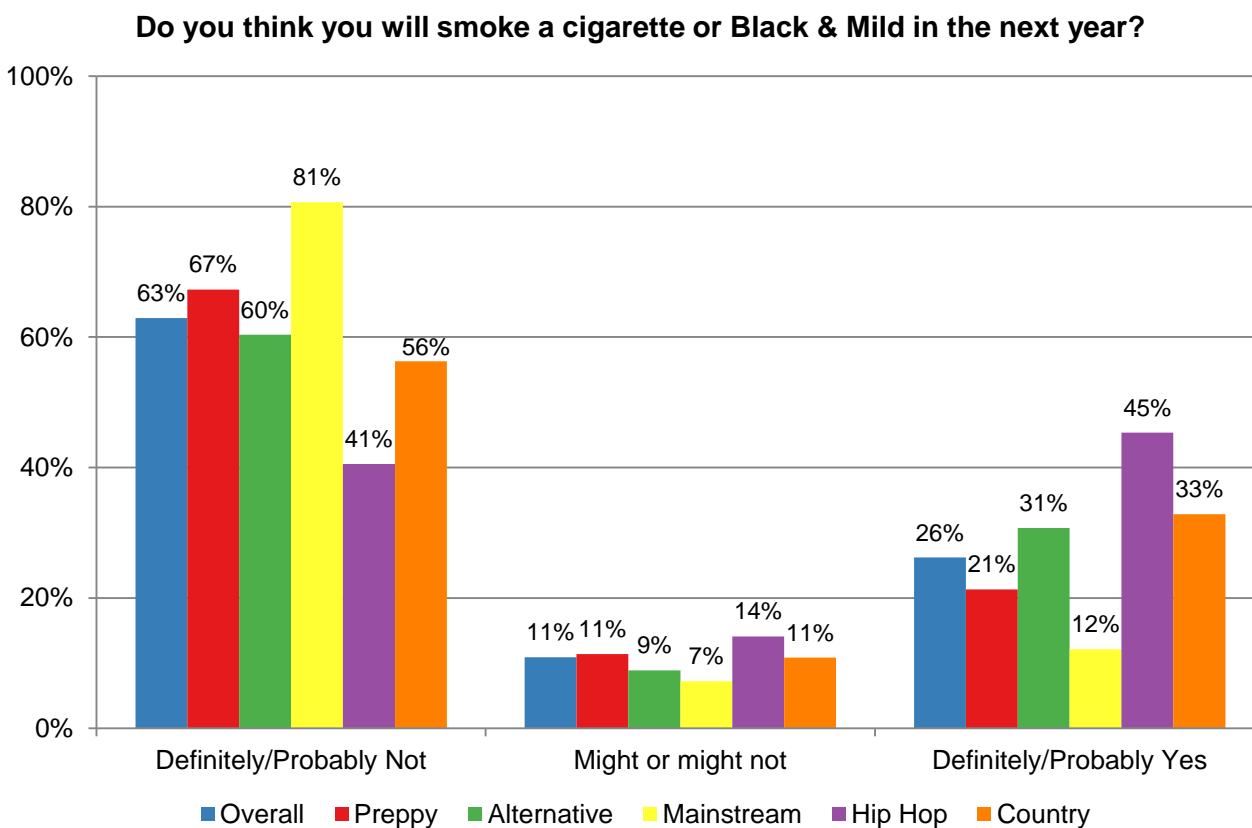
Figure 6. Rates of smokeless tobacco use by peer crowd.



Likelihood of Smoking in the Next Year By Peer Crowd Association

Mainstream youth were most likely to say they definitely or probably *would not smoke in the next year*. Hip Hop youth were most likely to say they definitely or probably *would smoke* in the next year.

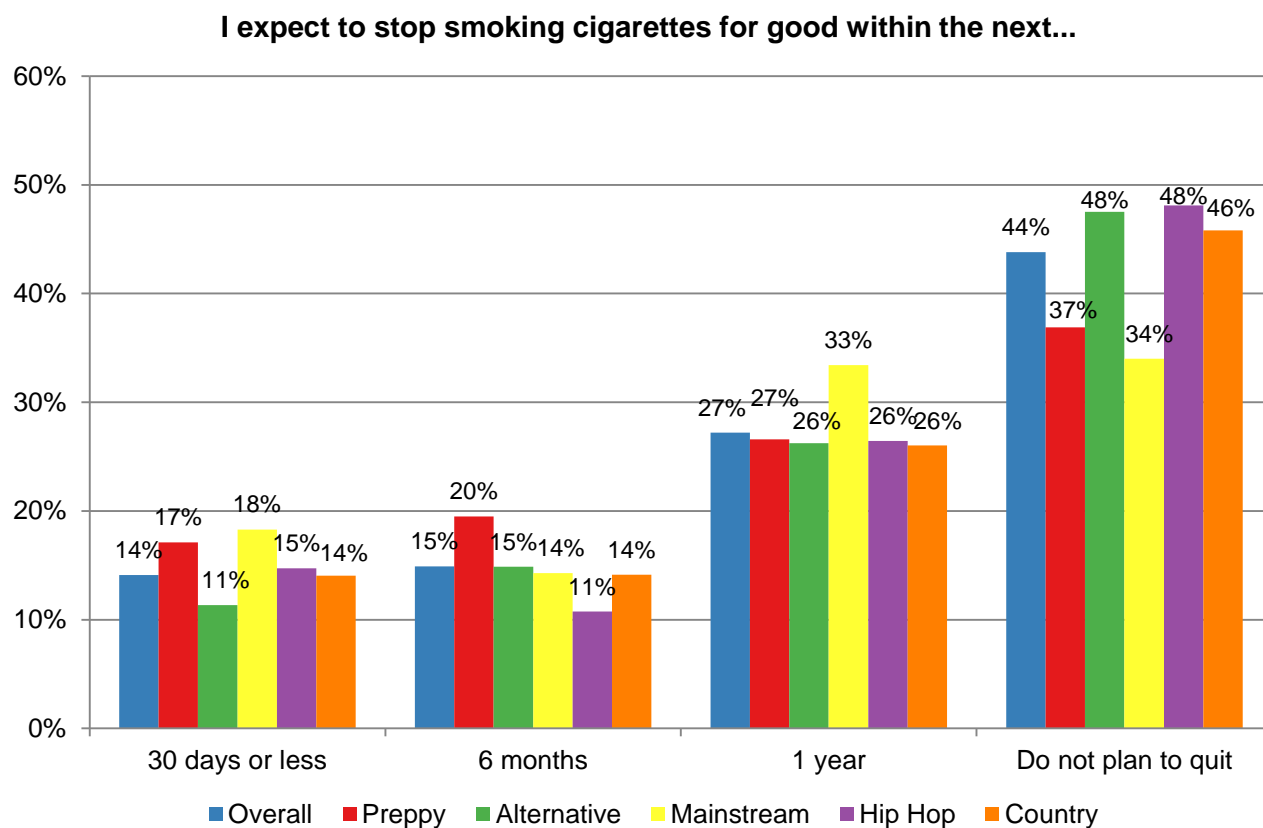
Figure 7. Likelihood of smoking in the next year by peer crowd.



Expect to Stop Smoking Cigarettes by Peer Crowd Association

Nearly half of youth who associated with Alternative, Hip Hop, or Country said they did not plan **to quit smoking cigarettes**. Preppy and Mainstream were generally most likely to say they would quit within a year.

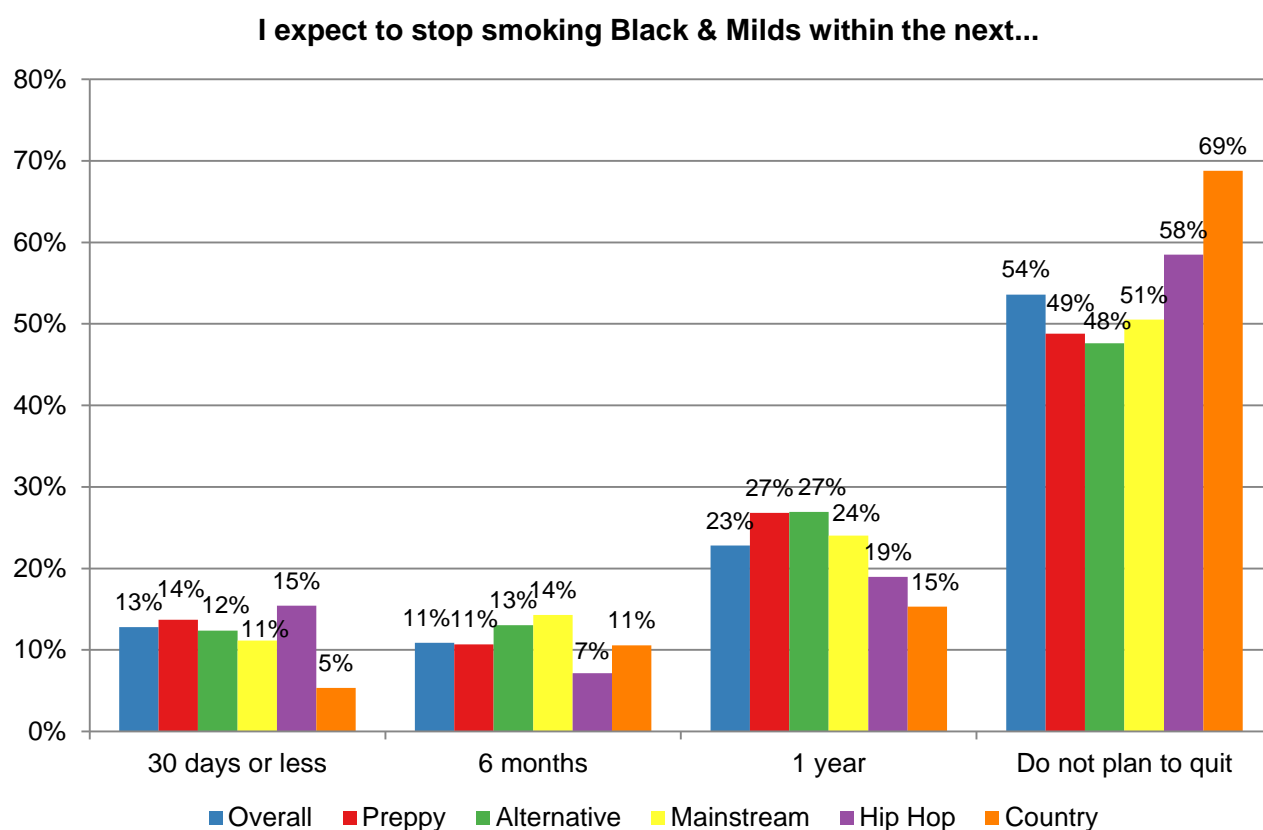
Figure 8. Expect to stop smoking cigarettes by peer crowd.



Expect to Stop Smoking Black & Milds by Peer Crowd Association

Country youth were most likely to say they do *not* plan to quit smoking **cigarillos**, followed by Hip Hop youth.

Figure 9. Expect to stop smoking Black and Milds by peer crowd.



Multiple Peer Crowd Associations and Tobacco Use

Youth associated with Alternative, Hip Hop, and/or Country peer crowds had the highest rates of **any tobacco use**. Six different combinations of these three crowds had rates of any tobacco use above 50%, and 13 combinations had rates of any tobacco use above 30%.

Respondents must have scored a minimum of three (3) points to be associated with a crowd.

Table 6. Rates of any tobacco use by peer crowd combinations.

Peer Crowd Combination	% Use Any Tobacco	Count
Alternative, Mainstream and Hip Hop	100.0%	70
Preppy, Alternative and Country	60.8%	92
Alternative and Hip Hop	60.8%	935
Alternative and Country	57.0%	1,403
Country only	55.8%	8,504
Hip Hop and Country	54.7%	403
Hip Hop only	49.1%	5,510
Mainstream, Hip Hop, and Preppy	42.7%	326
Preppy and Country	40.5%	4,450
Preppy and Alternative	39.2%	2,287
Alternative only	38.0%	6,441
Preppy and Hip Hop	37.9%	3,050
Mainstream and Hip Hop	31.6%	352
Preppy only	29.8%	9,653
No Dominant Influence	28.9%	3,247
Preppy, Mainstream, and Country	19.9%	504
Mainstream only	17.2%	2,275
Mainstream and Country	14.8%	660
Preppy and Mainstream	12.3%	4,193
Preppy, Alternative and Mainstream	12.2%	187
Alternative and Mainstream	10.7%	578

Multiple Peer Crowd Associations and Cigarette Smoking

Youth associated with Alternative, Hip Hop, and/or Country peer crowds had the highest **cigarette smoking rates**. Three peer crowd combinations had cigarette smoking rates above 50%. Among the ten combinations with the highest rates of cigarette smoking, all included Alternative, Hip Hop, and/or Country.

Respondents must have scored a minimum of three (3) points to be associated with a crowd.

Table 7. Cigarette smoking rates by peer crowd combinations.

Peer Crowd Combination	% Smoke Cigarettes	Count
Alternative, Mainstream and Hip Hop	100.0%	70
Alternative and Country	57.0%	1,403
Hip Hop and Country	54.7%	403
Alternative and Hip Hop	45.7%	703
Country only	35.0%	5,329
Alternative only	33.0%	5,586
Preppy, Alternative and Country	32.6%	49
Preppy and Alternative	29.5%	1,721
Hip Hop only	27.7%	3,116
Mainstream, Hip Hop, and Preppy	25.5%	195
No Dominant Influence	23.4%	2,631
Preppy and Country	22.7%	2,500
Preppy only	17.7%	5,723
Mainstream and Hip Hop	15.3%	171
Preppy and Hip Hop	14.8%	1,188
Mainstream only	12.7%	1,678
Preppy, Mainstream, and Country	10.4%	264
Alternative and Mainstream	10.3%	556
Mainstream and Country	8.4%	376
Preppy and Mainstream	7.7%	2,615
Preppy, Alternative and Mainstream	4.5%	68

Multiple Peer Crowd Associations and Black & Mild Smoking

Two peer crowd combinations have **cigarillo smoking rates** above 50%, and one of these two combinations included Preppy. The crowd combinations that had cigarillo smoking rates of 20% or higher all included Alternative, Hip Hop, and/or Country, while three included Preppy.

Respondents must have scored a minimum of three (3) points to be associated with a crowd.

Table 8. Cigarillo smoking rates by peer crowd combinations.

Peer Crowd Combination	% Smoke Cigarillos	Count
Alternative, Mainstream and Hip Hop	100.0%	70
Preppy, Alternative and Country	60.8%	92
Hip Hop and Country	44.9%	331
Alternative and Hip Hop	44.4%	684
Hip Hop only	40.2%	4,515
Mainstream, Hip Hop, and Preppy	37.4%	286
Preppy and Hip Hop	32.5%	2,618
Mainstream and Hip Hop	22.8%	255
Alternative and Country	21.4%	526
Country only	20.8%	3,161
Alternative only	19.8%	3,350
Preppy only	18.6%	6,011
Preppy and Alternative	18.2%	1,064
No Dominant Influence	17.3%	1,948
Preppy and Country	16.6%	1,827
Mainstream only	11.4%	1,505
Preppy, Alternative and Mainstream	7.0%	107
Preppy and Mainstream	6.1%	2,068
Mainstream and Country	5.8%	260
Preppy, Mainstream, and Country	1.8%	45
Alternative and Mainstream	1.5%	81

Multiple Peer Crowd Associations and Smokeless Tobacco Use

The four peer crowds with the highest rates of **dip or chew use** all included youth who associate with the Country peer crowd.

Respondents must have scored a minimum of three (3) points to be associated with a crowd.

Table 9. Rates of smokeless tobacco use by peer crowd combinations.

Peer Crowd Combination	% Use Dip or Chew	Count
Country only	37.2%	5,664
Preppy, Alternative and Country	32.6%	49
Preppy and Country	22.5%	2,480
Alternative and Country	18.9%	465
Alternative and Hip Hop	18.7%	288
Hip Hop and Country	17.3%	128
Preppy, Mainstream, and Country	15.6%	395
Hip Hop only	12.7%	1,424
No Dominant Influence	11.3%	1,265
Alternative only	8.9%	1,507
Preppy and Alternative	7.3%	424
Mainstream and Country	7.1%	319
Preppy only	7.1%	2,290
Preppy, Alternative and Mainstream	6.7%	103
Mainstream only	5.9%	773
Mainstream, Hip Hop, and Preppy	5.6%	43
Alternative and Mainstream	4.1%	220
Preppy and Hip Hop	3.7%	297
Preppy and Mainstream	2.6%	893
Mainstream and Hip Hop	2.2%	24

Tobacco Use Among Alternative, Hip Hop, and Country Current Users

Among **current tobacco users only**, youth who associate with Alternative, Hip Hop, Country or some peer crowd combination including these three crowds (*minimum score of 3*) account for 65% of Virginia youth that use any tobacco. That percentage decreases to 48% when Hip Hop is removed.

Youth who used any tobacco and associated with Alternative, Hip Hop, and/or Country (minimum score of 3) represented 20% of the entire sample.

Table 10. Any tobacco use by association with Alternative, Hip Hop, and/or Country (score of 3).

Peer Crowd Combination	% Use Any Tobacco	% of those Using Any Tobacco	Count
Country only	55.8%	15.4%	8,504
Alternative only	38.0%	11.7%	6,441
Hip Hop only	49.1%	10.0%	5,510
Preppy and Country	40.5%	8.1%	4,450
Preppy and Hip Hop	37.9%	5.5%	3,050
Preppy and Alternative	39.2%	4.1%	2,287
Alternative and Country	57.0%	2.5%	1,403
Alternative and Hip Hop	60.8%	1.7%	935
Mainstream and Country	14.8%	1.2%	660
Alternative and Mainstream	10.7%	1.0%	578
Preppy, Mainstream, and Country	19.9%	0.9%	504
Hip Hop and Country	54.7%	0.7%	403
Mainstream and Hip Hop	31.6%	0.6%	352
Mainstream, Hip Hop, and Preppy	42.7%	0.6%	326
Preppy, Alternative and Mainstream	12.2%	0.3%	187
Preppy, Alternative and Country	60.8%	0.2%	92
Alternative, Mainstream and Hip Hop	100.0%	0.1%	70
Total	N/A	64.6%	35,752

Note: Total for “% using any tobacco” is greater than 100% as the reported values are the percent of youth using any tobacco who associate with the peer crowd or crowd combination compared to youth who use any tobacco and do **not** associate with the crowd or crowd combination.

Tobacco Use Among Alternative, Hip Hop, and Country Peer Crowds (minimum score of 1)

Youth who associate with Alternative, Hip Hop, Country or some peer crowd combination including these three crowds (*minimum score of 1*) account for 84% of all cigarette smokers, 82% of all cigarillos smokers, 88% of all chew or dip users, and 83% of all any tobacco users.

Note: the purpose of this table is to understand the potential reach of a campaign, rather than the norms of the more dedicated members of a peer crowd.

Table 11. Percentages of tobacco users by peer crowd combination.

	% of all cigarette smokers	% of all cigarillo smokers	% of all chew/dip users	% of all tobacco users (any form)
Associated with Country ONLY	42.6% (15,483)	30.6% (9,429)	61.1% (11,642)	41.0% (22,626)
Associated with Hip Hop ONLY	25.9% (9,402)	39.4% (12,145)	21.6% (4,110)	29.2% (16,093)
Associated with Alternative ONLY	38.1% (13,859)	30.4% (9,373)	22.8% (4,343)	31.5% (17,375)
Associated with Country OR Alternative	68.5% (24,906)	53.4% (16,441)	75.6% (14,395)	63.3% (34,915)
Associated with Country OR Hip Hop	63.8% (23,202)	65.8% (20,274)	77.1% (14,697)	65.8% (36,291)
Associated with Hip Hop OR Alternative	58.0% (21,098)	63.3% (19,499)	41.1% (7,823)	55.3% (30,498)
Associated with Country OR Alternative OR Hip Hop	84.4% (30,686)	82.1% (25,295)	88.3% (16,822)	83.1% (45,833)

Tobacco Use Among Alternative, Hip Hop, and Country Current Users (minimum score of 1)

Youth who associate with Alternative, Hip Hop, Country or some peer crowd combination including these three crowds (*minimum score of 1*) account for 75% of Virginia youth that use any tobacco. That percentage decreases to 51% when Hip Hop is removed.

Youth who used any tobacco and associated with Alternative, Hip Hop, and/or Country (minimum score of 1) represented 23% of the entire sample.

Table 12. Any tobacco use by association with Alternative, Hip Hop, and/or Country (score of 1).

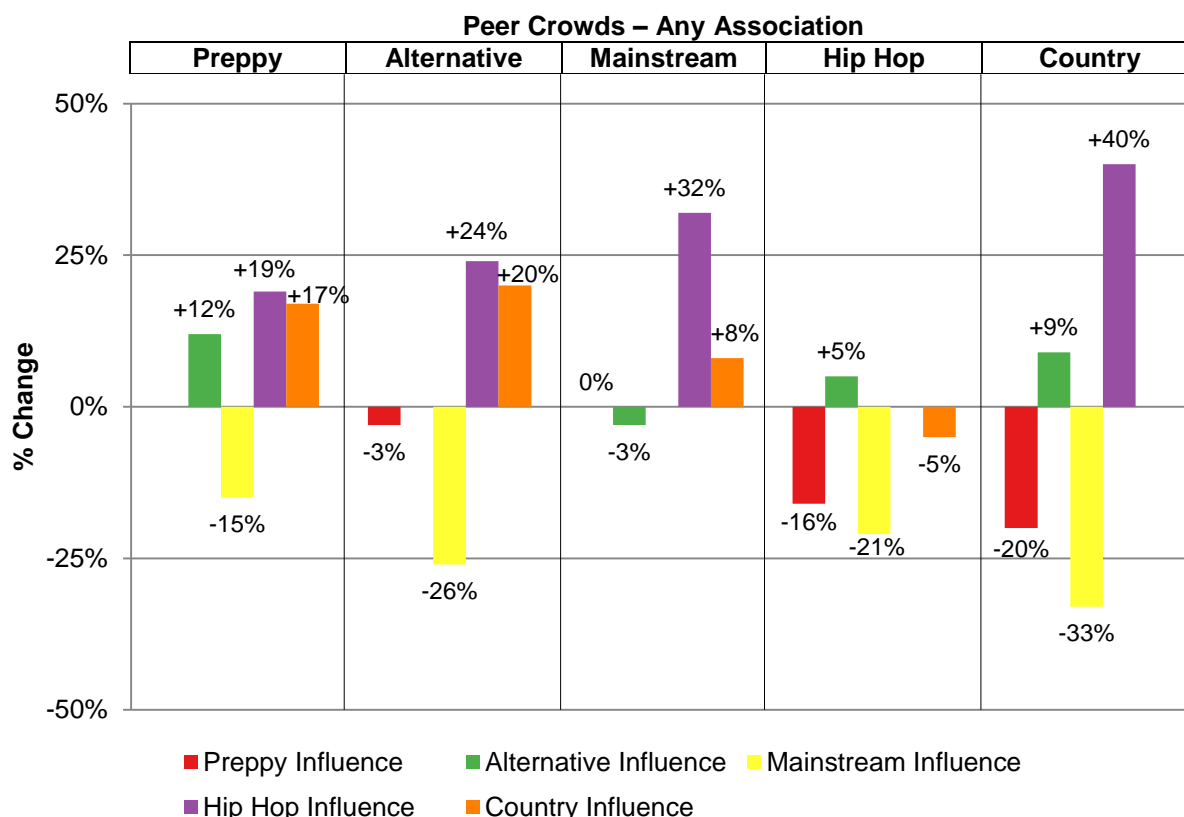
Peer Crowd Combination	% Use Any Tobacco	% of those Using Any Tobacco	Count
Hip Hop, Country, and Alternative	100%	0%	32
Preppy, Alternative, Mainstream, and Hip Hop	100%	0%	160
Hip Hop, Country, Preppy and Alternative	100%	0%	124
Alternative, Mainstream and Hip Hop	65%	0%	240
Alternative and Country	61%	4%	2,215
Country only	57%	11%	6,004
Hip Hop only	56%	7%	3,916
Alternative and Hip Hop	54%	2%	929
Hip Hop and Country	51%	1%	714
Hip Hop, Country, and Preppy	49%	1%	289
Preppy and Country	42%	11%	6,041
Mainstream, Hip Hop, and Preppy	41%	2%	1,323
Preppy and Alternative	40%	7%	3,908
Alternative only	39%	9%	4,747
Preppy and Hip Hop	39%	8%	4,683
Mainstream and Hip Hop	34%	1%	596
Preppy, Alternative and Country	30%	1%	313
Mainstream and Country	23%	2%	1,215
Preppy, Alternative, Mainstream, and Country	23%	0%	75
Preppy, Mainstream, and Country	19%	3%	1,802
Alternative and Mainstream	16%	2%	1,146
Preppy, Alternative and Hip Hop	16%	0%	85
Preppy, Alternative and Mainstream	13%	1%	713
Alternative, Mainstream and Country	11%	0%	144
Total	N/A	75%	41,415

Multiple Peer Crowd Associations and Tobacco Use

Use of any tobacco is *higher* if a youth is associated with Hip Hop, while use of any tobacco is *lower* if a youth is associated with Mainstream or Preppy.

Figure 10 below shows the change in percent of respondents who used any tobacco product in the last 30 days based on association with a specific peer crowd. The peer crowd groups are indicated at the top, and the reported values therefore are the influence of another peer crowd in terms of the change in percentage of respondents who said they had used any tobacco product in the last 30 days.

Figure 10. Influence of multiple peer crowd associations on rates of any tobacco use.



The single greatest influence was Hip Hop on Country, which resulted in a 40% increase in the number of youth using any tobacco. The second greatest influence was Mainstream on Country, which resulted in a 33% decrease in the number of youth using any tobacco.

The influence of Hip Hop is consistently *positive*, meaning that the percent of respondents who said they used any tobacco product in the last 30 days *increased* for all groups when a respondent also associated with Hip Hop. In other words, all respondents who associated with Hip Hop and any one of the other four crowds were *more likely* to have used any tobacco product in the last 30 days.

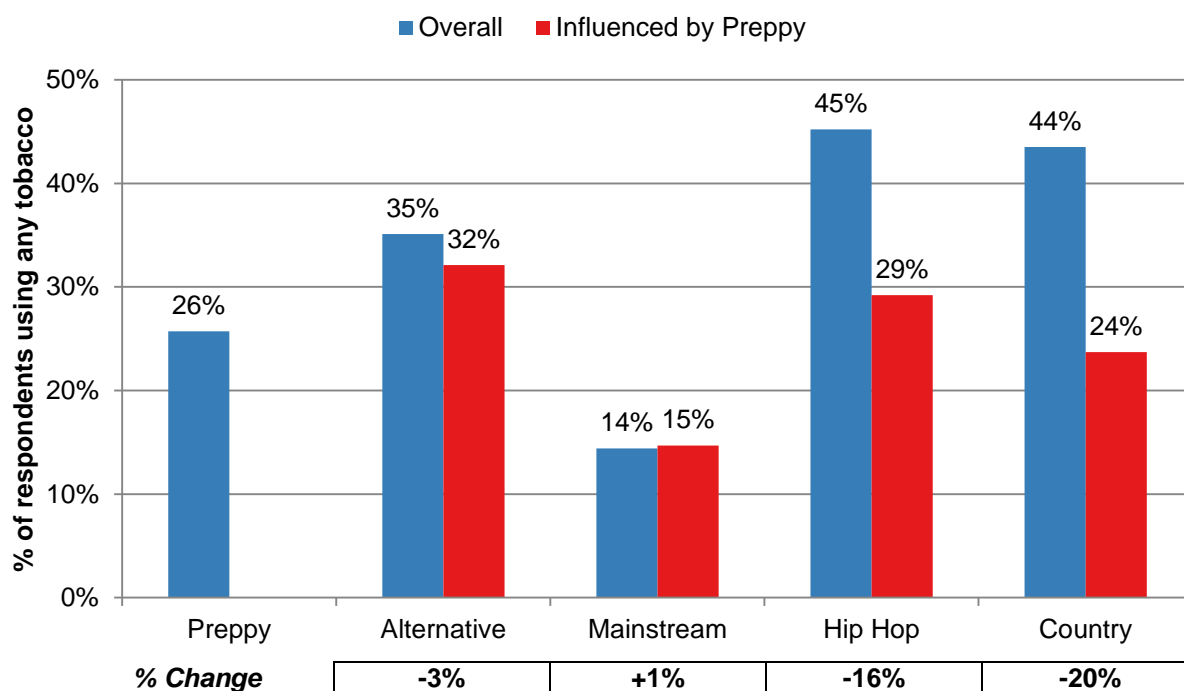
Preppy Influence on Tobacco Use by Peer Crowd Association

Except for those youth who associate with Mainstream, association with Preppy reduced the likelihood of youth **using any tobacco**. The largest decrease was among Country youth who also associated with Preppy.

The next five graphs (Figures 11-15) report the overall rate of any tobacco use for each peer crowd and the influence associating with another peer crowd has on the percentage of respondents using any tobacco. The graphs display the overall percentage of respondents in each peer crowd who reported using any tobacco, along with the percentage of respondents associating with two peer crowds (the initial crowd and the given crowd of interest) who reported using any tobacco product. At the bottom of each graph is the change in percent of respondents who used any tobacco product in the last 30 days.

On average, the percentage of respondents using any tobacco dropped nearly 13% if youth associated with any peer crowd and Preppy.

Figure 11. Influence of Preppy on rates of any tobacco use by peer crowd.

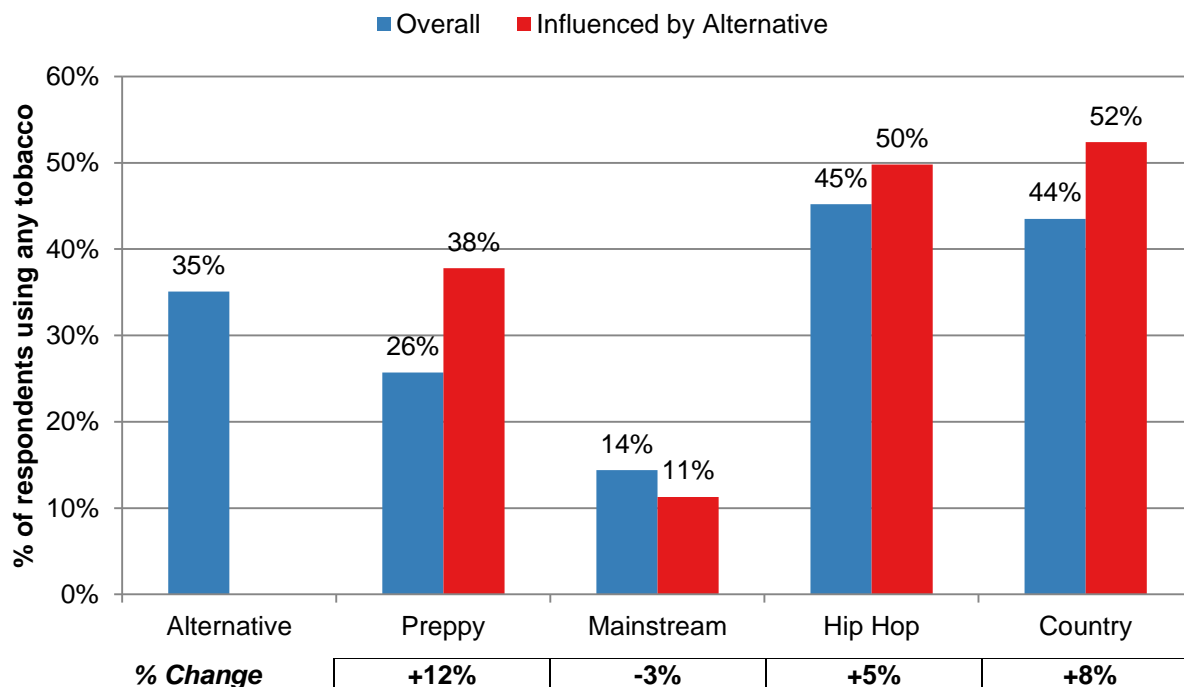


Alternative Influence on Tobacco Use by Peer Crowd Association

Association with the Alternative peer crowd increased the likelihood of **any tobacco use** for all crowds except Mainstream. Preppy youth who also associated with Alternative had the greatest increase in rates of any tobacco use.

Although associating with Alternative reduced the number of Mainstream youth who use tobacco, on average the percentage of respondents who used any tobacco increased 8% if youth associated with Alternative and either Preppy, Hip Hop, or Country.

Figure 12. Influence of Alternative on rates of any tobacco use by peer crowd.

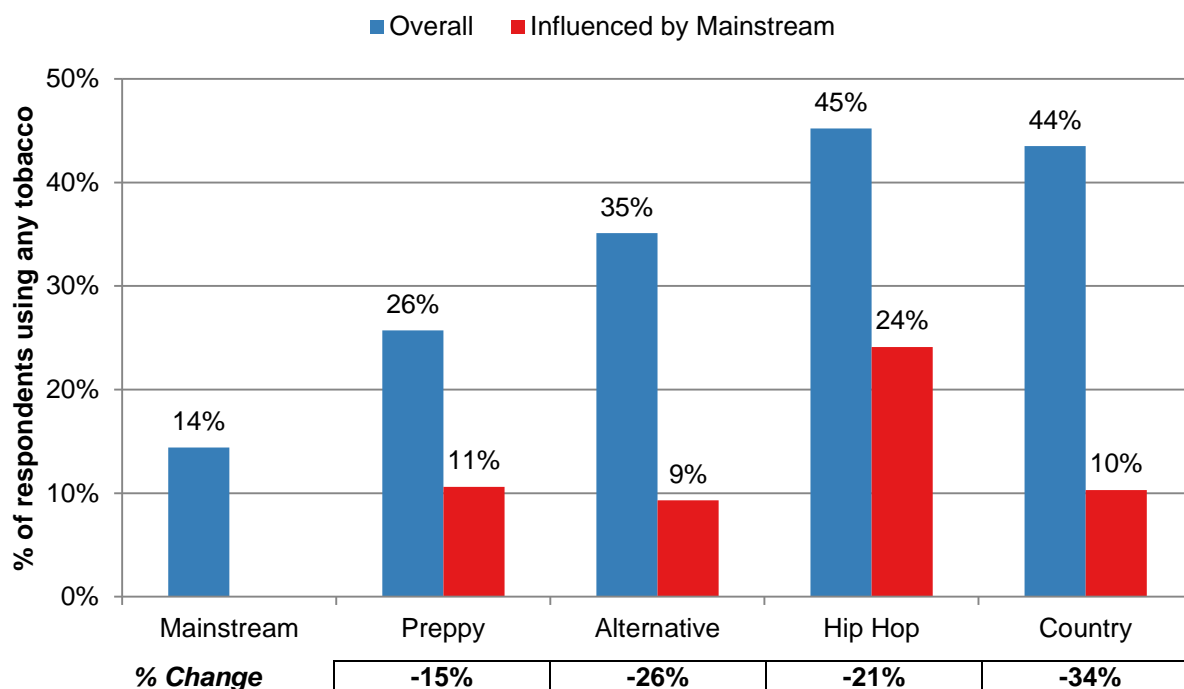


Mainstream Influence on Tobacco Use by Peer Crowd Association

Youth associated with Mainstream were less likely to **use any tobacco**.

The peer crowd that most influenced respondents to *use tobacco less* was Mainstream. The percentage of respondents using any tobacco dropped on average 24% if youth associated with any peer crowd and Mainstream.

Figure 13. Influence of Mainstream on rates of any tobacco use by peer crowd.

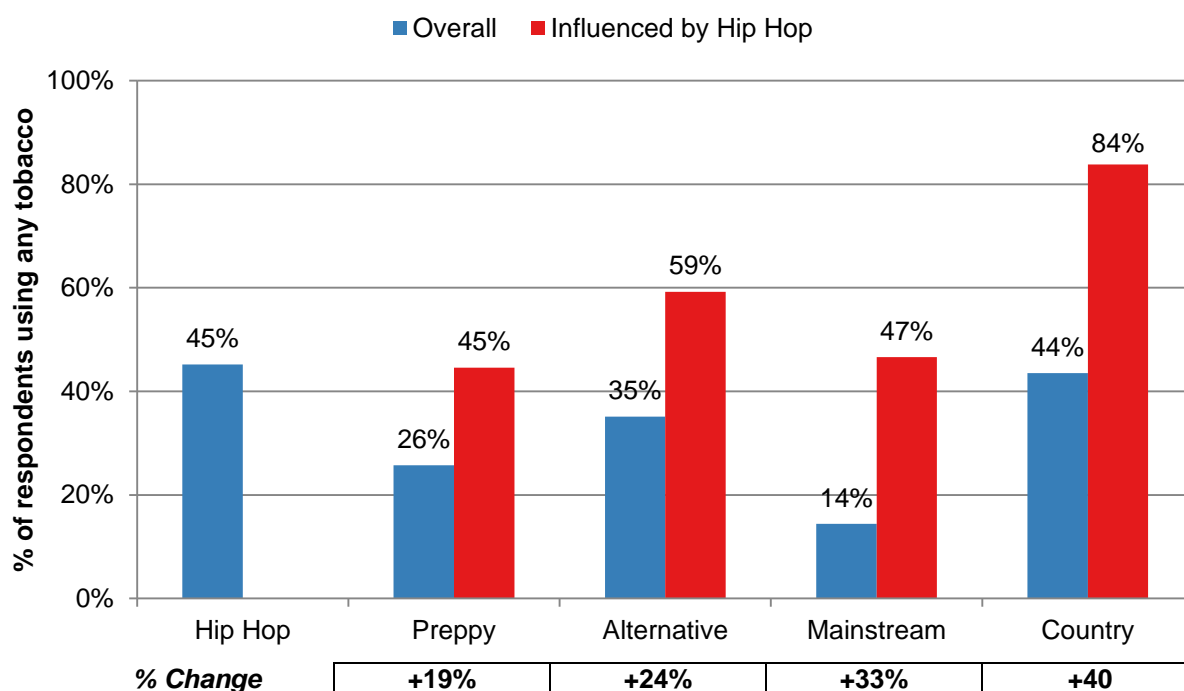


Hip Hop Influence on Tobacco Use by Peer Crowd Association

Youth associated with Hip Hop were more likely to **use any tobacco**. Regardless of the primary peer crowd association of a youth, if that youth also associated with Hip Hop, the likelihood of tobacco use increased.

Hip Hop was the peer crowd that most influenced respondents to *use tobacco more*. On average, the percentage of respondents who used any tobacco increased by 29% if youth associated with any of the peer crowds and Hip Hop.

Figure 14. Influence of Hip Hop on rates of any tobacco use by peer crowd.

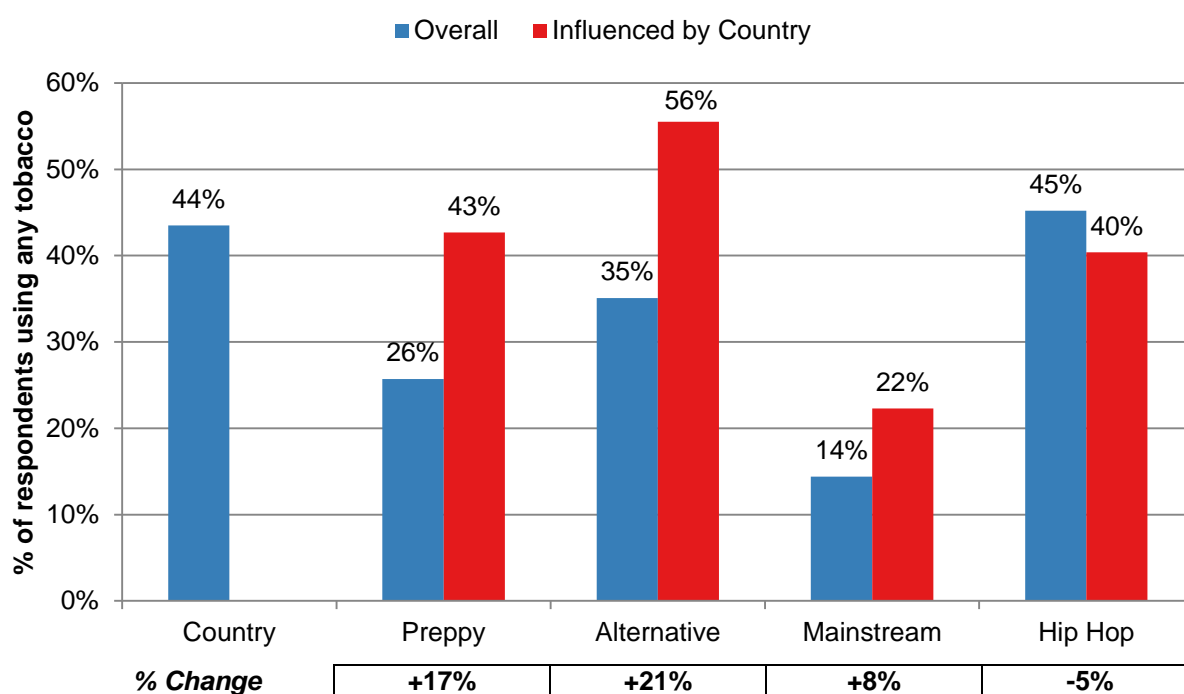


Country Influence on Tobacco Use by Peer Crowd Association

Youth associated with Country were more likely to **use any tobacco**. With the exception of Hip Hop, association with Country and another peer crowd increased the proportion of youth using any tobacco.

The proportion of youth using any tobacco increased on average by 15% if youth associated with Country and either Preppy, Alternative, or Mainstream.

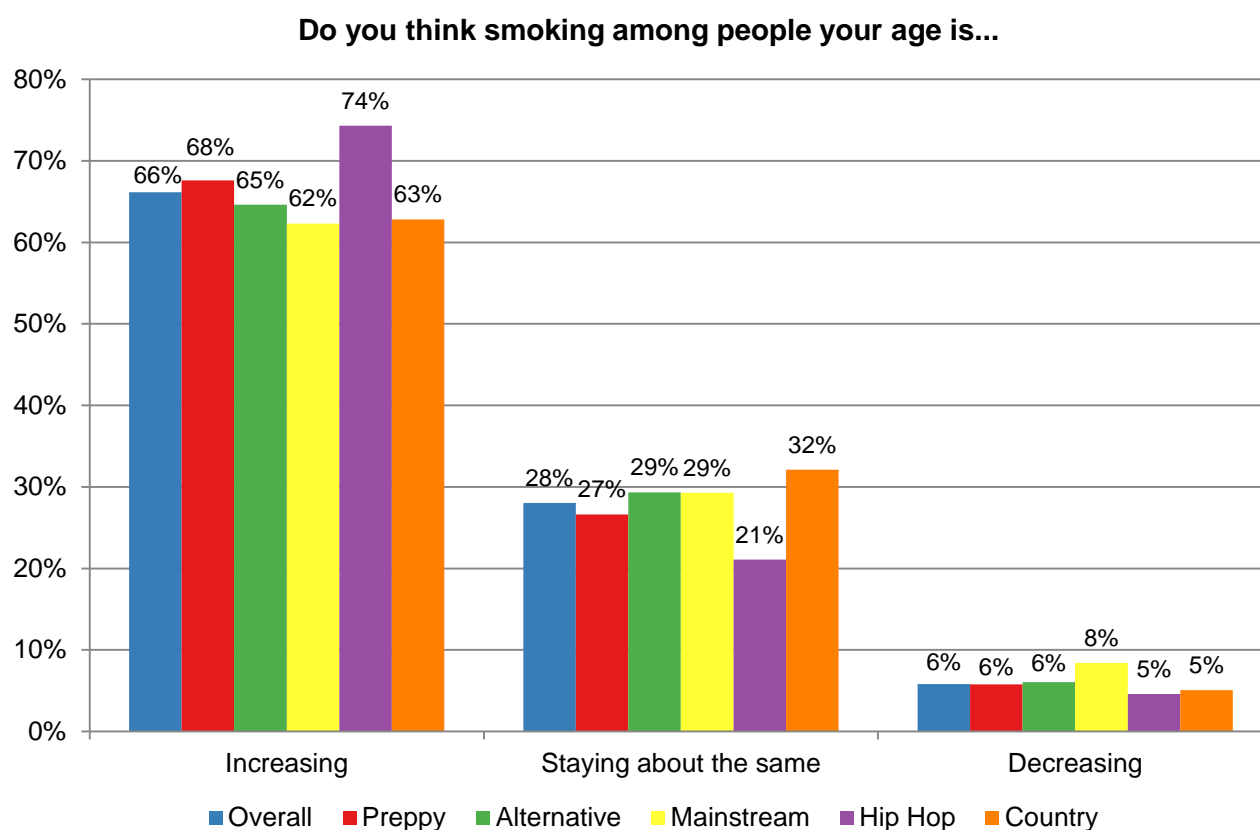
Figure 15. Influence of Country on rates of any tobacco use by peer crowd.



Perceptions of Smoking Among Peers

Nearly three-quarters (74%) of youth that associate with Hip Hop said that smoking is increasing.

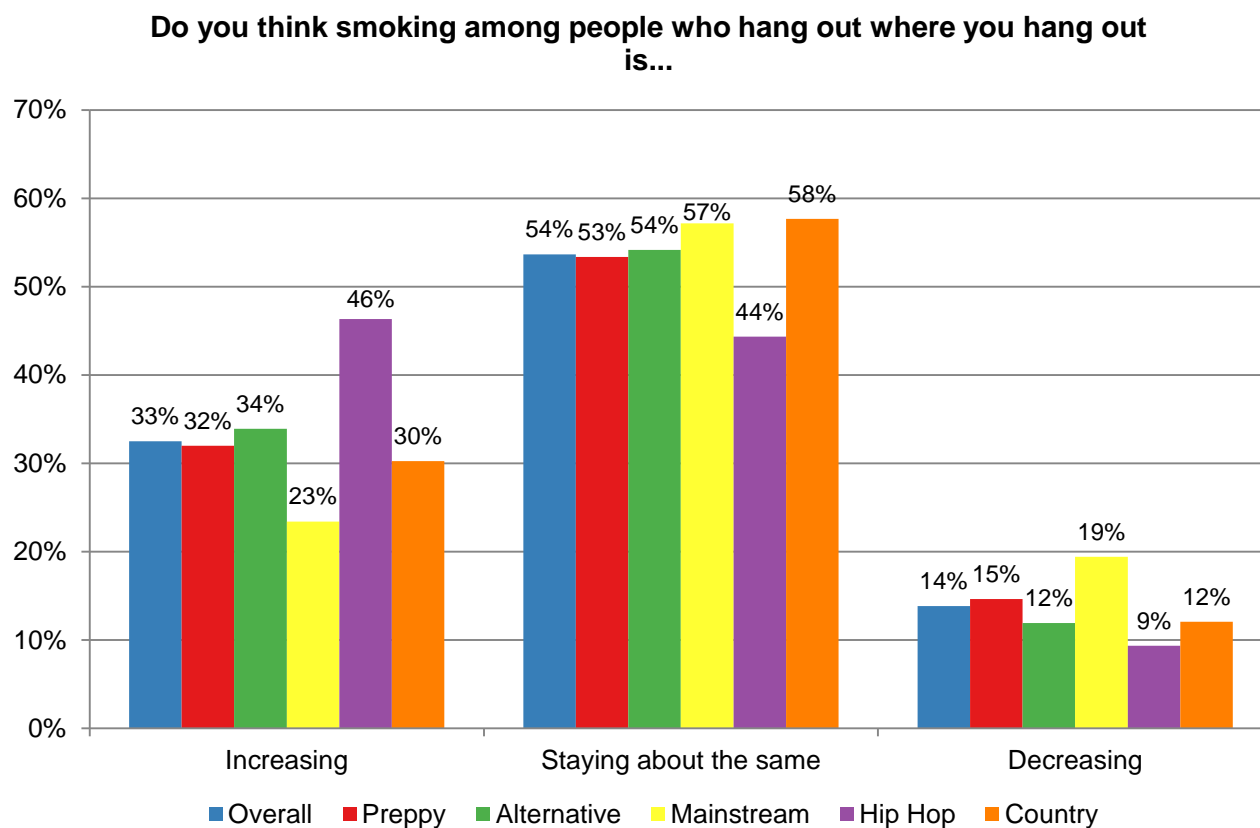
Figure 16. Perceptions of smoking among peers by peer crowd.



Perceptions of Smoking Among Peers at Hang Outs

Nearly half (46%) of Hip Hop youth said smoking is increasing among people who hang out where they hang out. One-fifth (19%) of Mainstream youth said smoking at hang outs is decreasing.

Figure 17. Perceptions of smoking among peers at hang outs by peer crowd.



Perceptions of Average Peers Smoking

More than half (59%) of Hip Hop youth said more than 50% of people smoke where they hang out. The lowest rates of smoking were reported by Mainstream youth, with 46% saying less than 10% smoke where they hang out.

Figure 18. Perceptions of average people smoking by peer crowd.

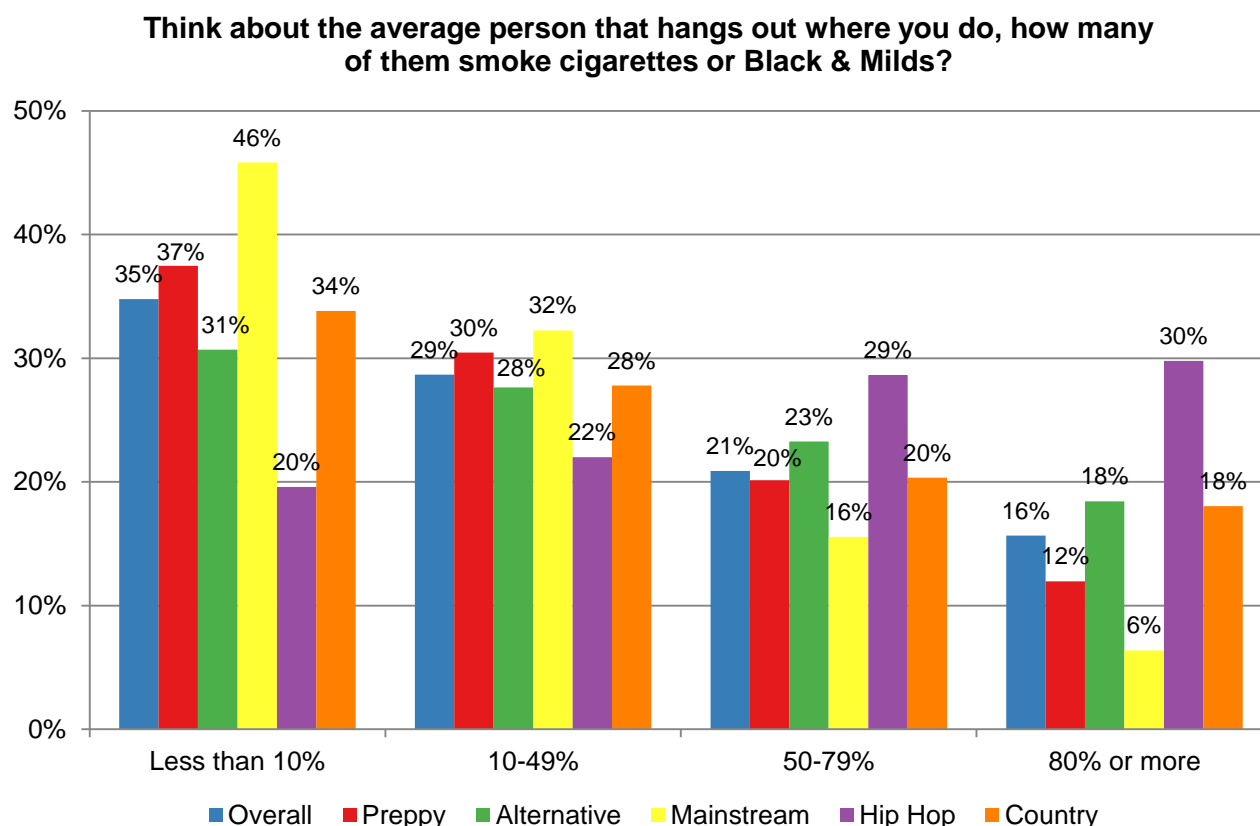


Table 13. Perceptions of average people smoking mean percentages.

	<i>M</i>	<i>SD</i>
Overall	37.3%	32.1%
Preppy	33.9%	30.6%
Alternative	41.6%	32.8%
Mainstream	26.6%	26.9%
Hip Hop	52.8%	32.7%
Country	38.5%	32.8%

Perceptions of Popular Peers Smoking

One-third (34%) of Hip Hop youth said 80% or more of the most popular people smoke where they hang out, compared to about one third (36%) of Mainstream youth who said less than 10% smoke.

Figure 19. Perceptions of popular people smoking by peer crowd.

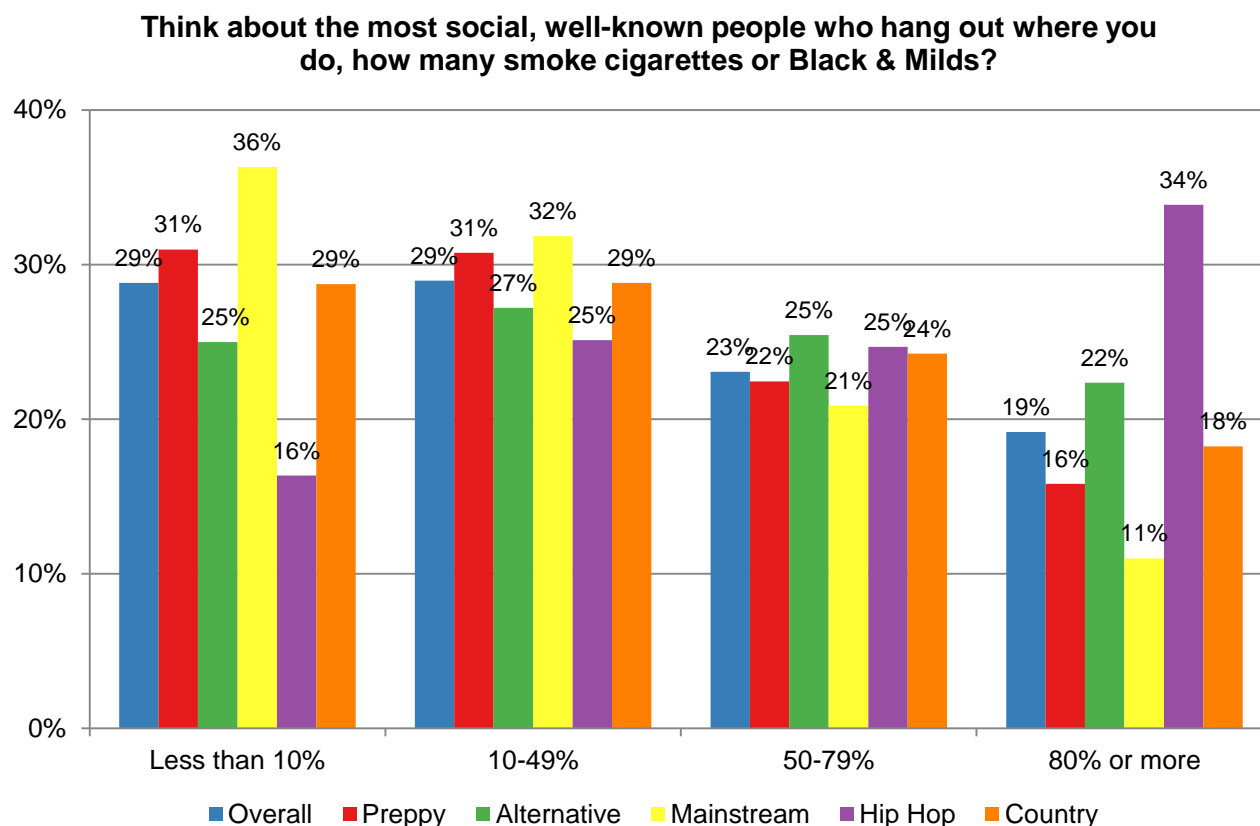


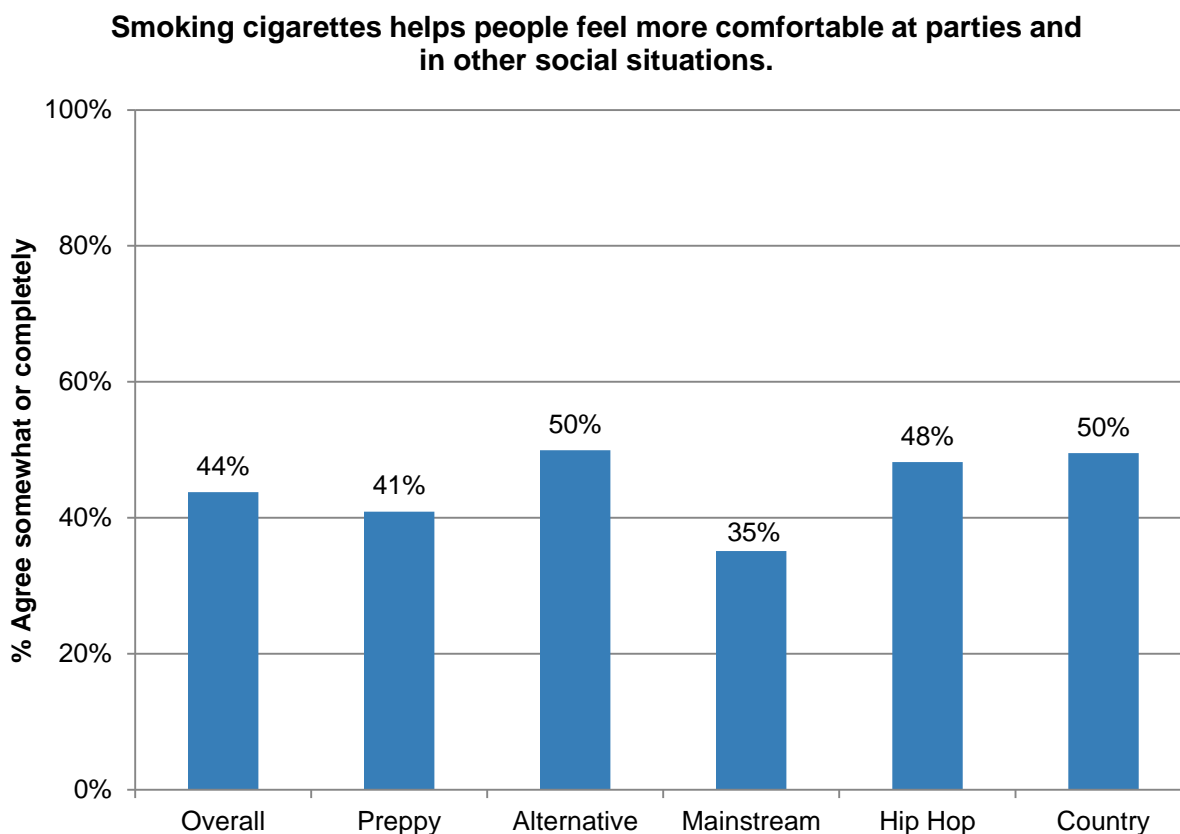
Table 14. Perceptions of popular people smoking mean percentages.

	<i>M</i>	<i>SD</i>
Overall	41.5%	32.6%
Preppy	38.5%	31.7%
Alternative	45.3%	32.8%
Mainstream	33.5%	29.9%
Hip Hop	55.0%	32.7%
Country	40.9%	32.3%

Smoking to Feel Comfortable in Social Situations Attitudes

Alternative, Hip Hop, and Country youth were all equally likely to agree that smoking cigarettes helps people feel comfortable in social situations. Fewer Preppy and Mainstream youth agreed.

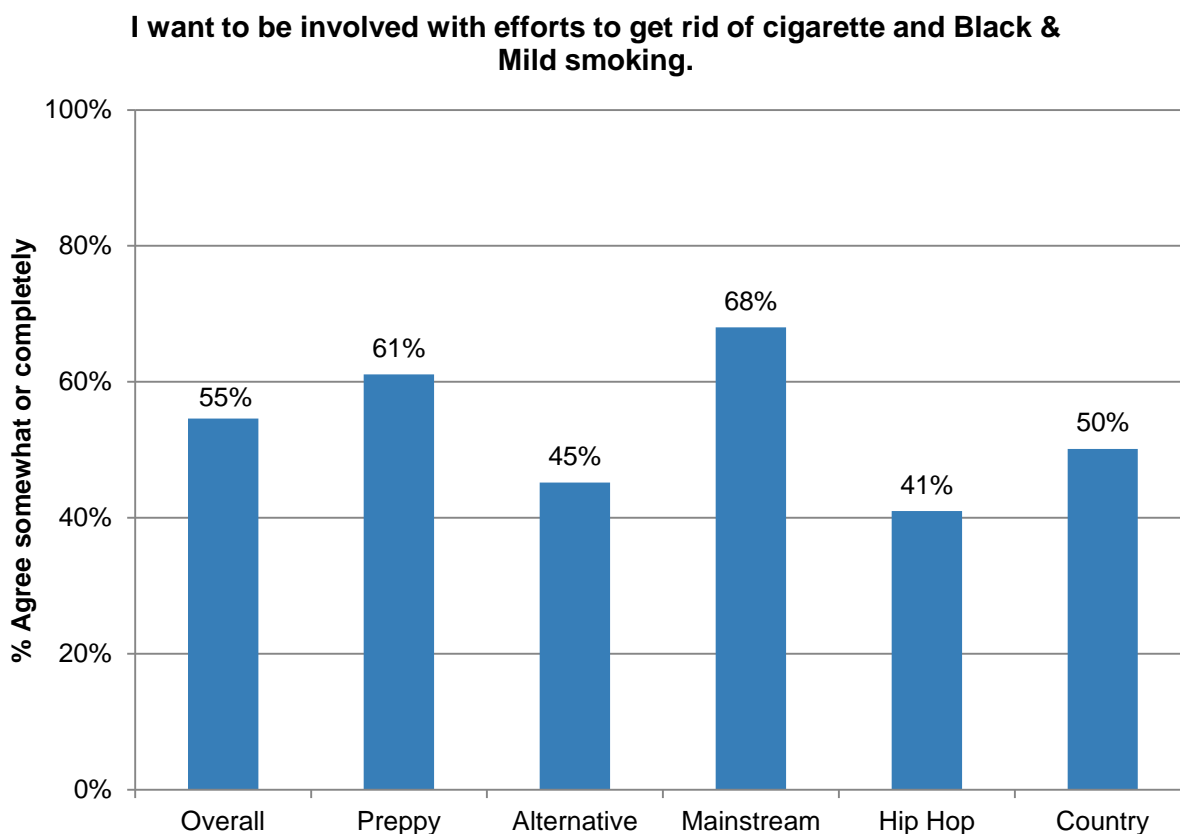
Figure 20. Agreement with smoking to feel comfortable in social situations by peer crowd.



Involved in Getting Rid of Smoking Attitudes

Mainstream youth were most likely to agree that they wanted to help end cigarette and Black & Mild smoking, followed by Preppy and then Country. Alternative and Hip Hop were least likely to agree.

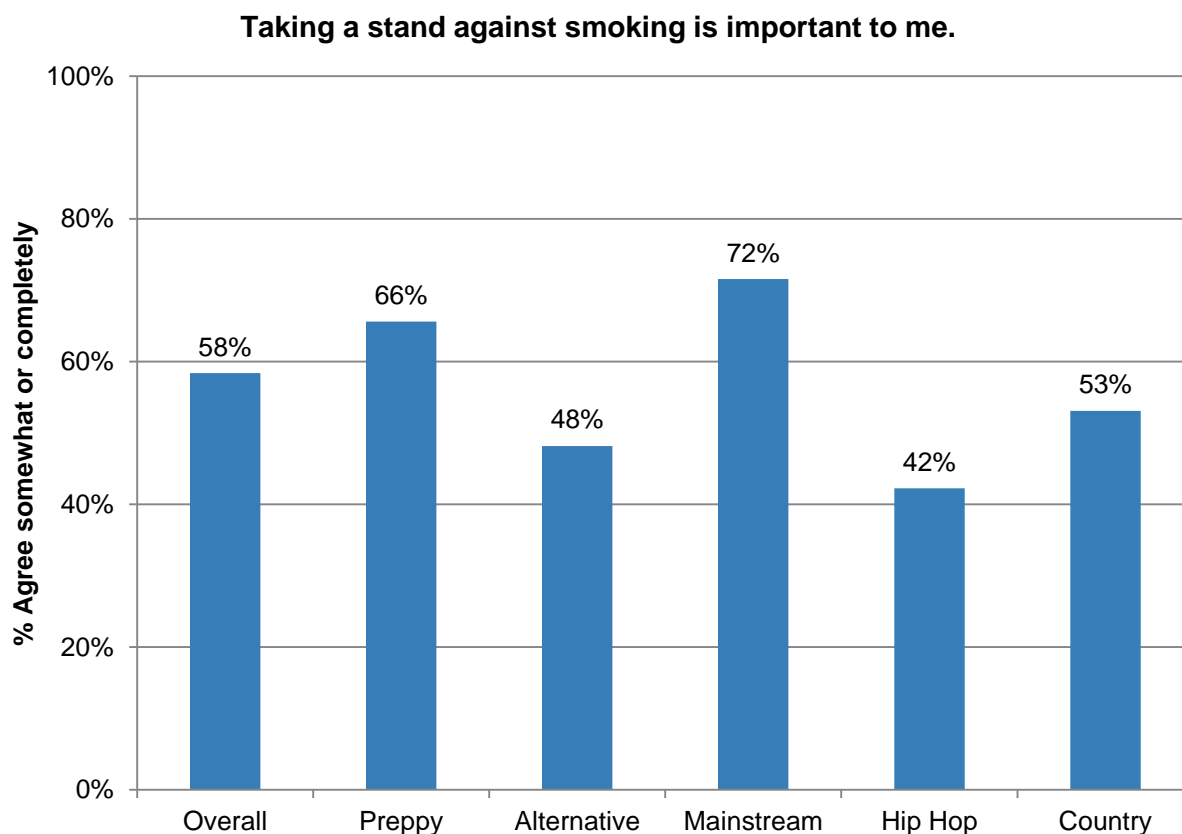
Figure 21. Agreement with wanting to be involved in getting rid of smoking by peer crowd.



Taking a Stand Against Smoking Attitudes

Mainstream youth were most likely agree that taking a stand against smoking is important, followed by Preppy and then Country. Alternative and Hip Hop were least likely to agree.

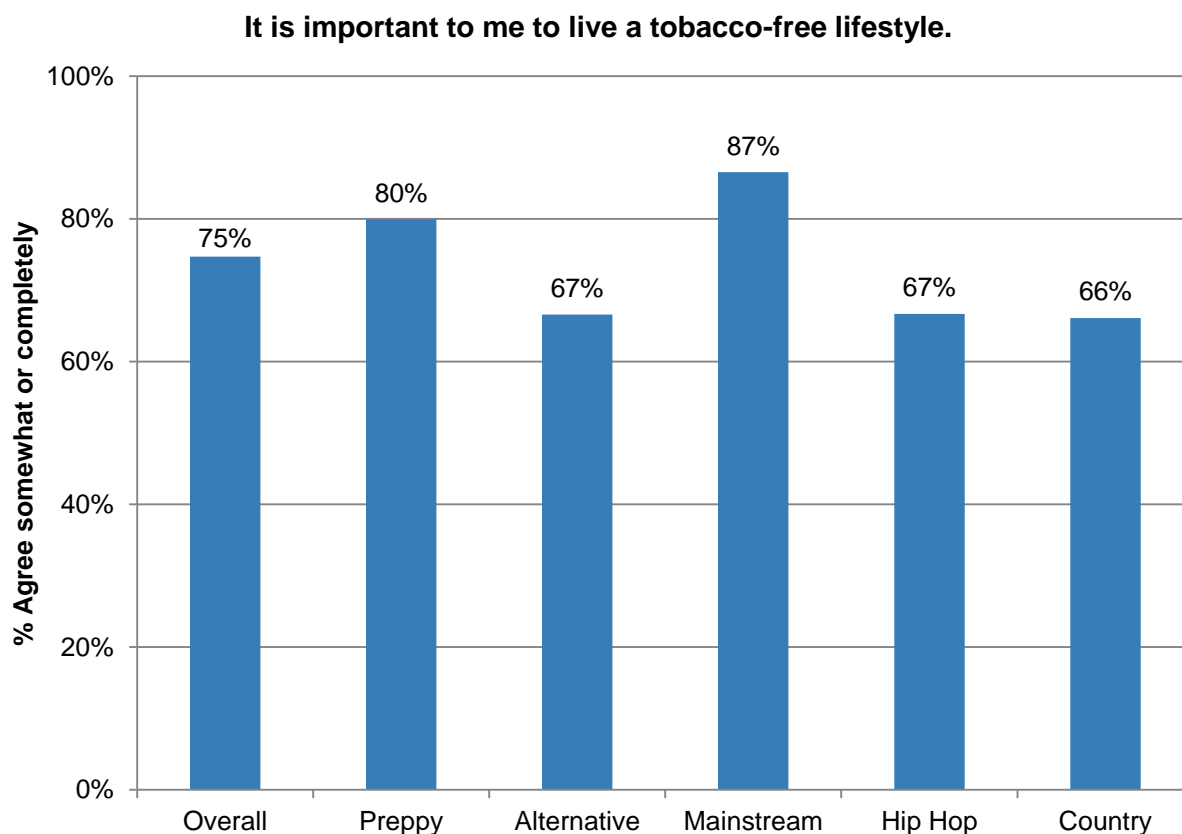
Figure 22. Agreement with taking a stand against tobacco by peer crowd.



Tobacco-Free Lifestyle Attitudes

More than 50% of all peer crowds said it was important to live a tobacco-free lifestyle. Mainstream followed by Preppy were most likely to agree. Alternative, Hip Hop and Country were least likely to agree.

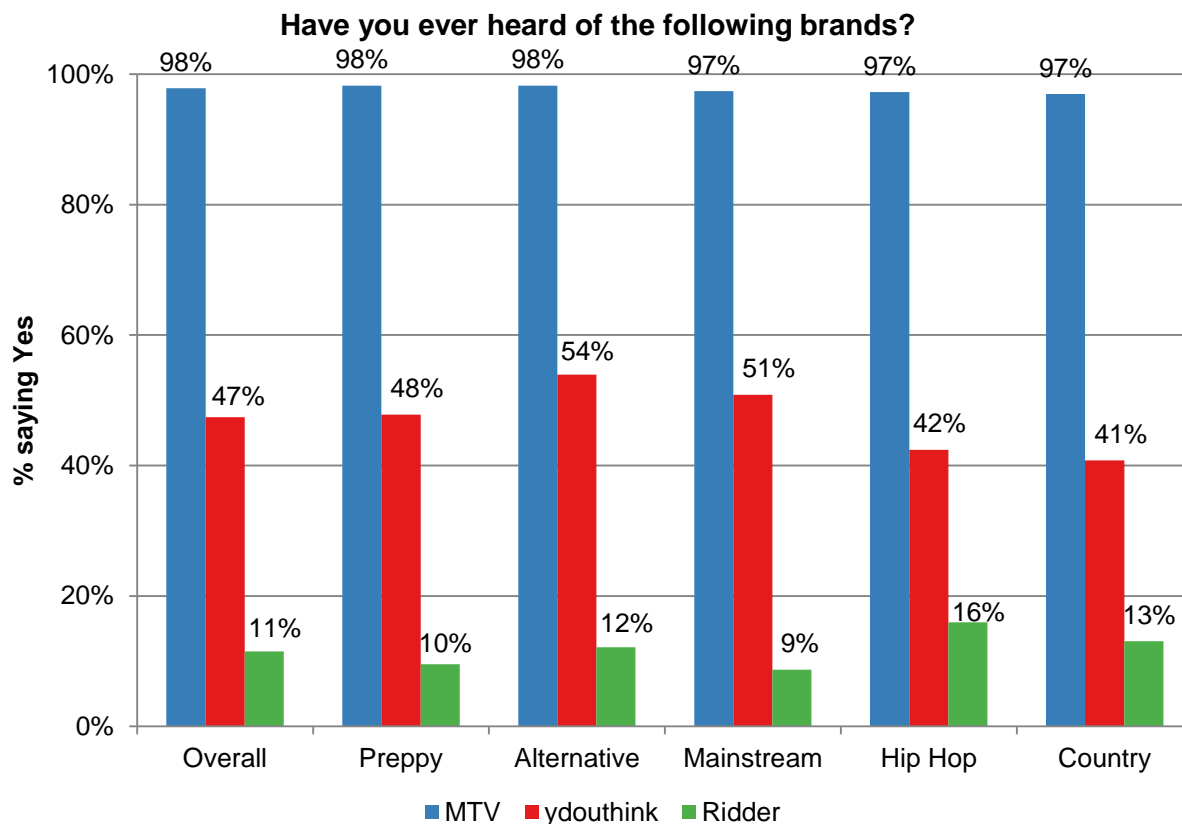
Figure 23. Agreement with living a tobacco-free lifestyle by peer crowd.



Brand Awareness

Almost all respondents were aware of the brand “MTV”. Alternative youth were more likely to say they had heard of *ydouthink* and Hip Hop youth were more likely to say they had heard of “Ridder.”

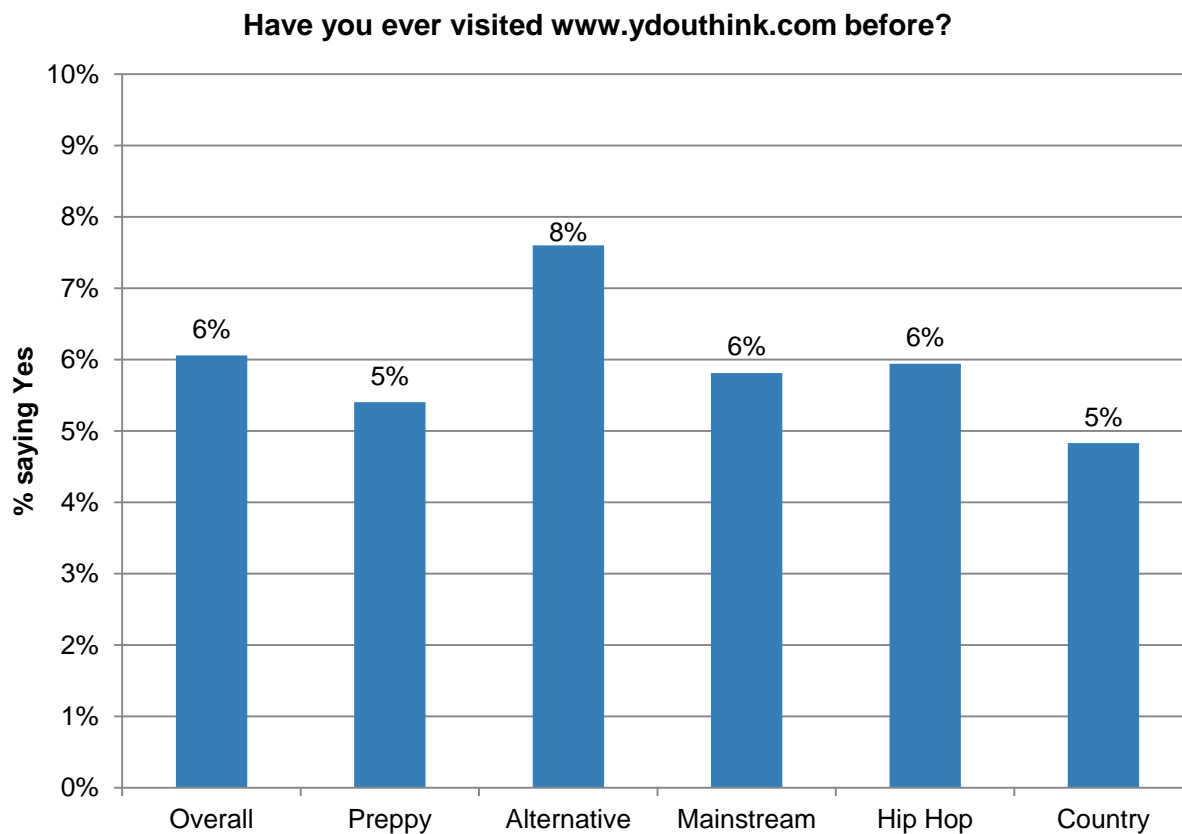
Figure 24. Brand awareness by peer crowd.



Visitors to www.ydouthink.com

Less than 10% of respondents in all five peer crowds reported visiting the *ydouthink* website. Among peer crowds, Alternative youth were most likely to say they had visited the website.

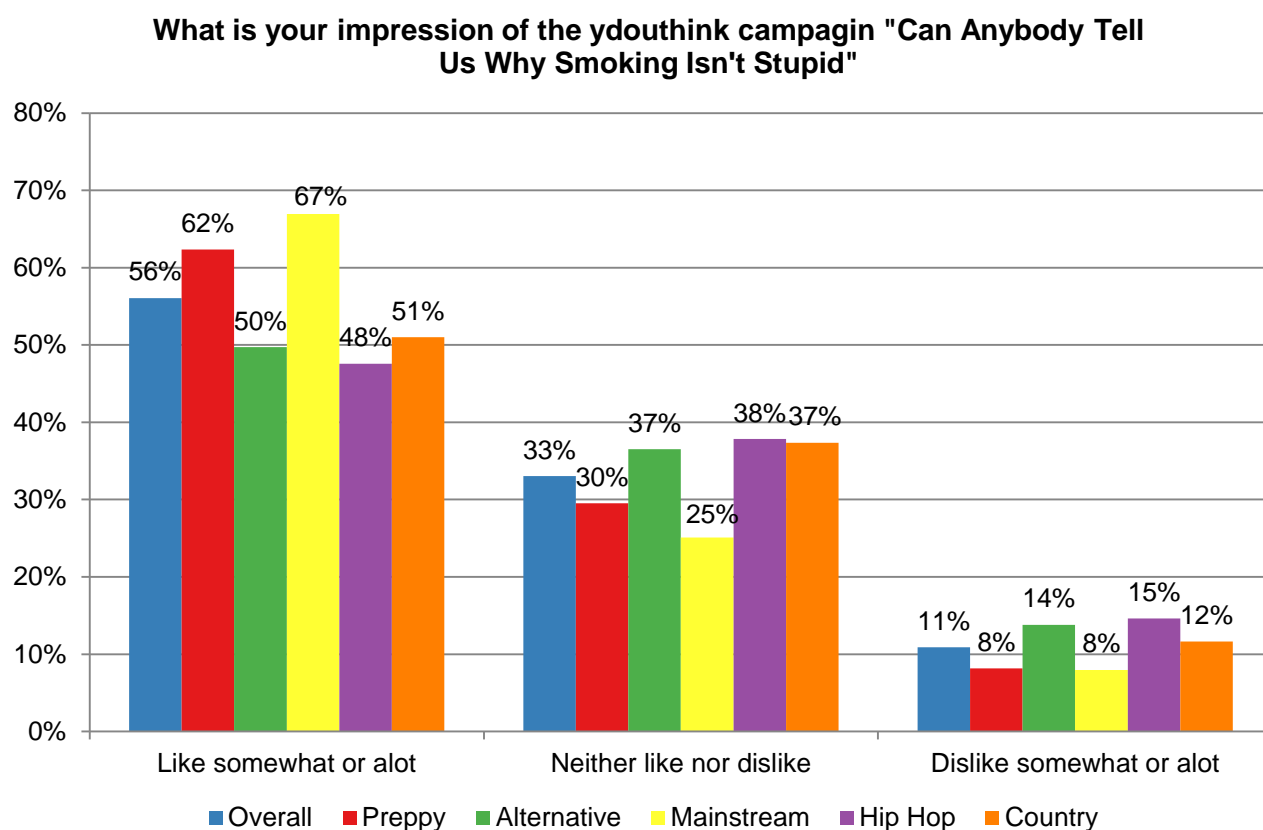
Figure 25. Ever visited *ydouthink.com* by peer crowd.



Impressions of “Can Anybody Tell Us Why Smoking Isn’t Stupid” Campaign

Mainstream and Preppy youth were more likely to say they liked the campaign. Country, Alternative, and Hip Hop were less likely.

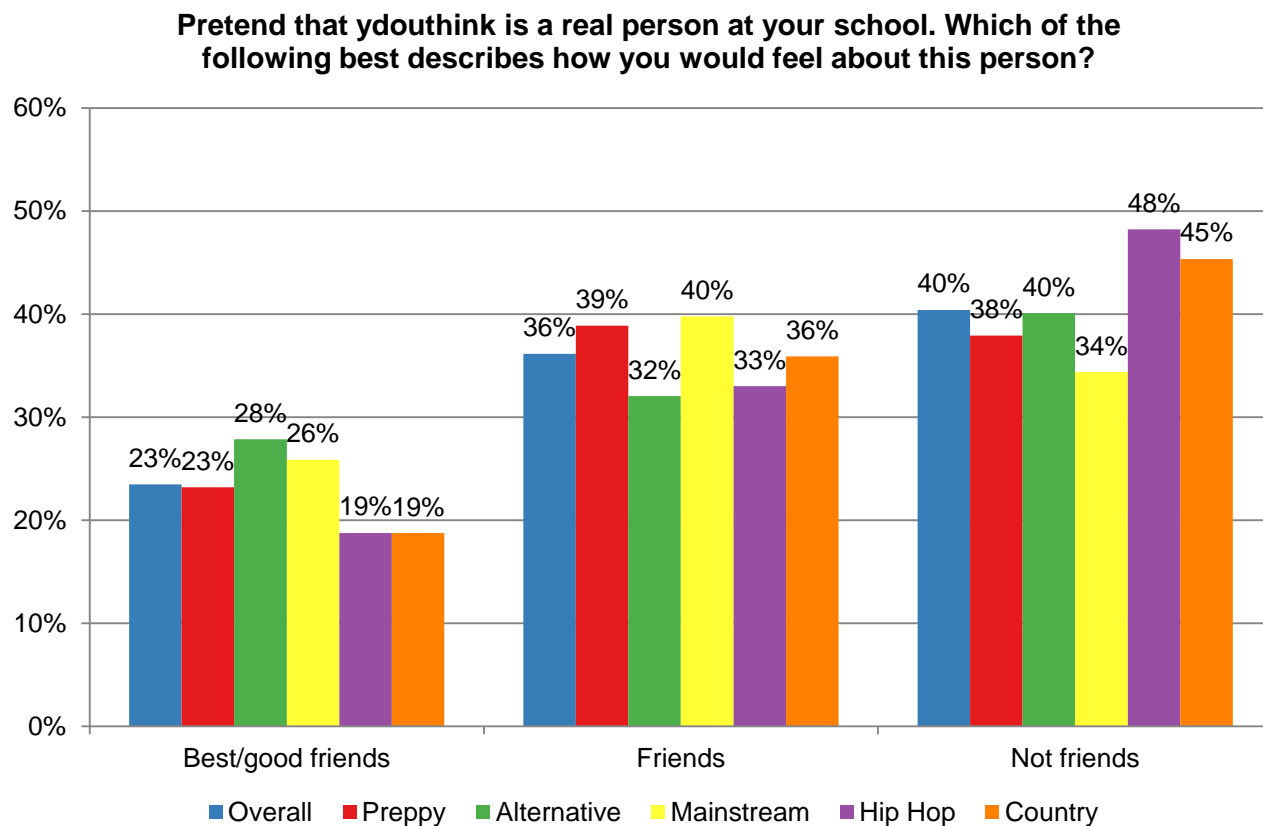
Figure 26. Impression of campaign by peer crowd among those aware of the campaign.



Friends with *ydouthink* Campaign

Alternative and Mainstream youth were more likely to say they would be best or good friends with *ydouthink* if it were a real person. Hip Hop and Country youth were more likely to say they would not be friends.

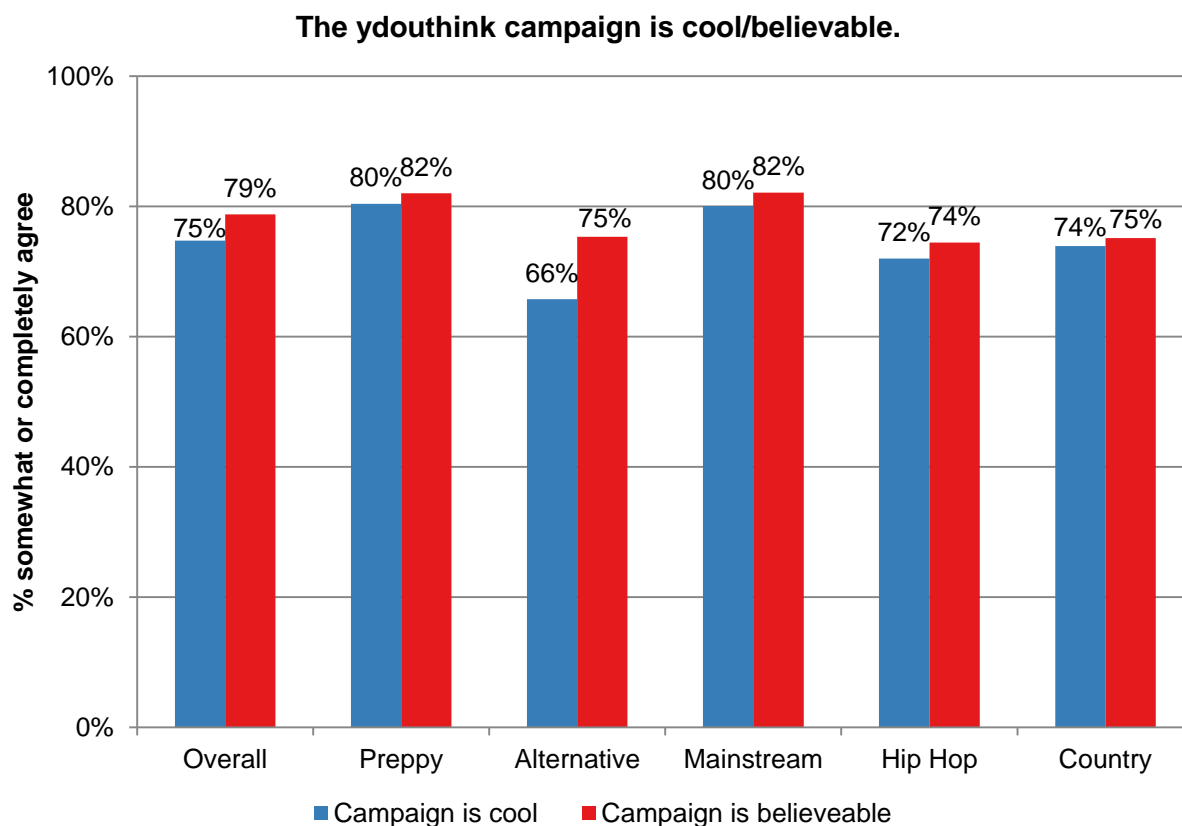
Figure 27. Friends with *ydouthink* by peer crowd among those aware of campaign.



ydouthink Campaign is Cool and/or Believable

Mainstream and Preppy youth were more likely to say the *ydouthink* campaign was cool or believable. Hip Hop, Country and Alternative were less likely.

Figure 28. Campaign is cool or believable by peer crowd among those aware of campaign.



Social Concern by Peer Crowd Association

Hip Hop youth were most likely to have high and medium levels of social concern. Mainstream youth were most likely to have low levels.

Figure 29. Social concern levels by peer crowd.

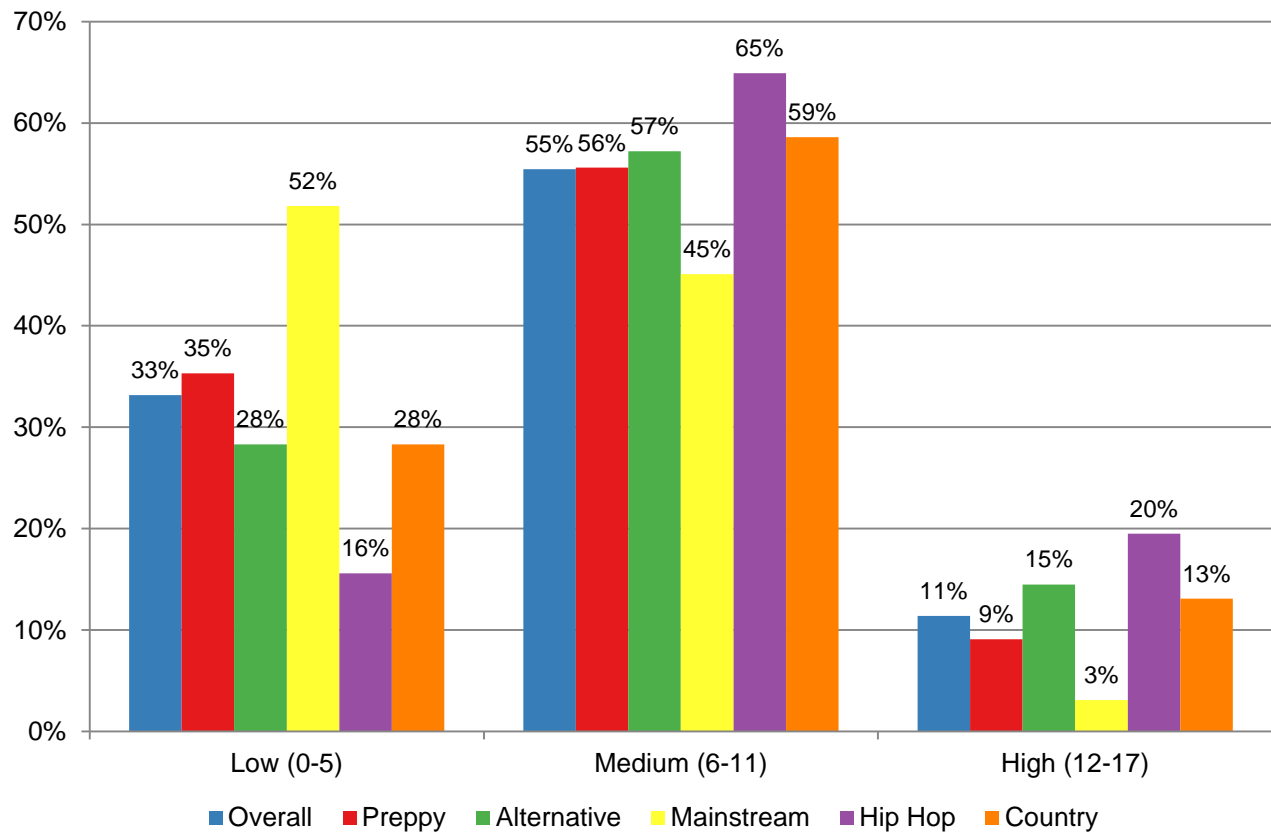


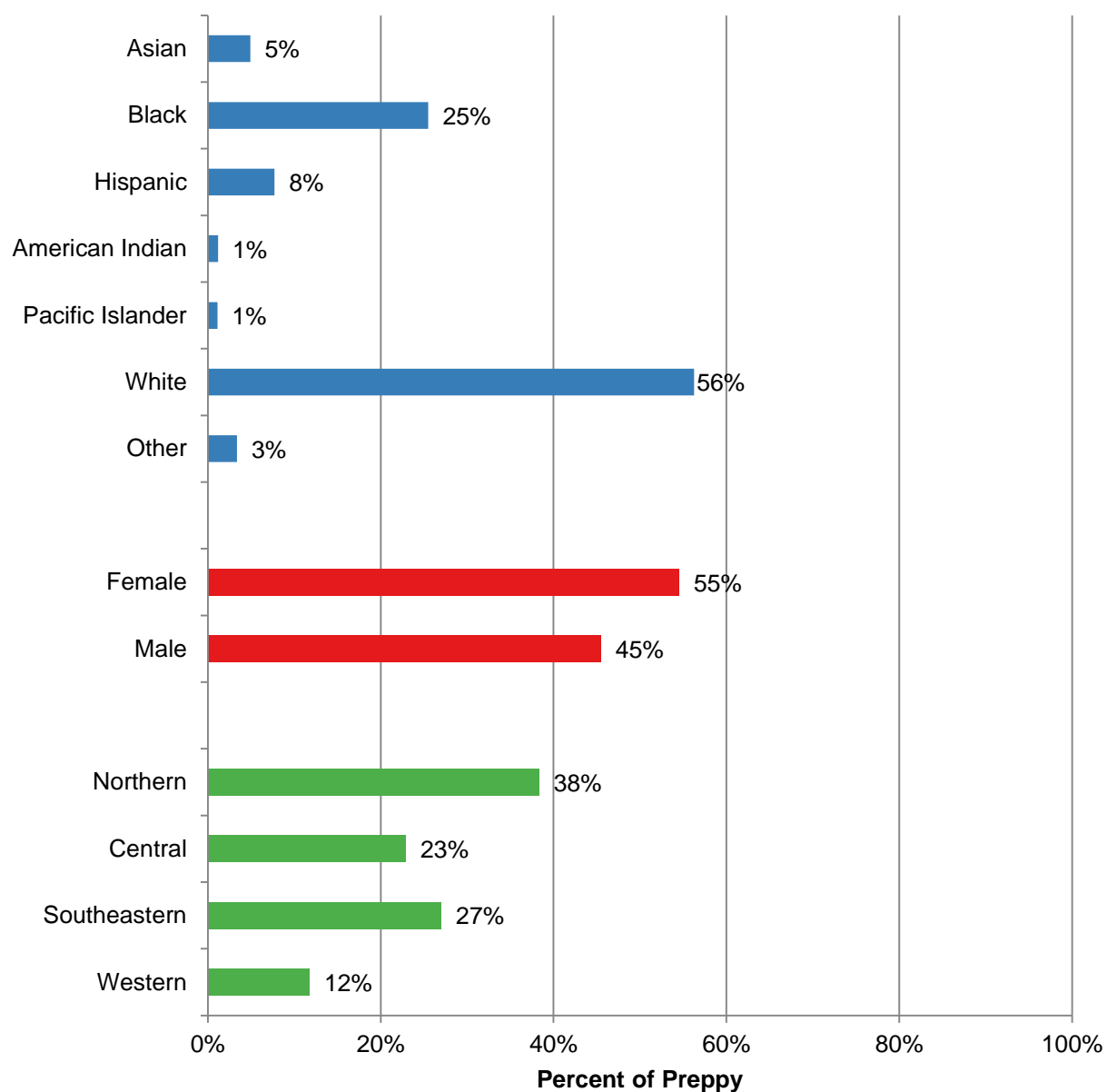
Table 15. Social concern mean scores.

	<i>M</i>	<i>SD</i>
Overall	7.23	3.44
Preppy	6.99	3.24
Alternative	7.63	3.43
Mainstream	5.65	3.04
Hip Hop	8.87	3.25
Country	7.55	3.43

Preppy Peer Crowd Demographics

Although most Preppy youth were white, a quarter was black. Preppy youth also tended to be more female than male and were more likely to be in the Northern part of the state than elsewhere.

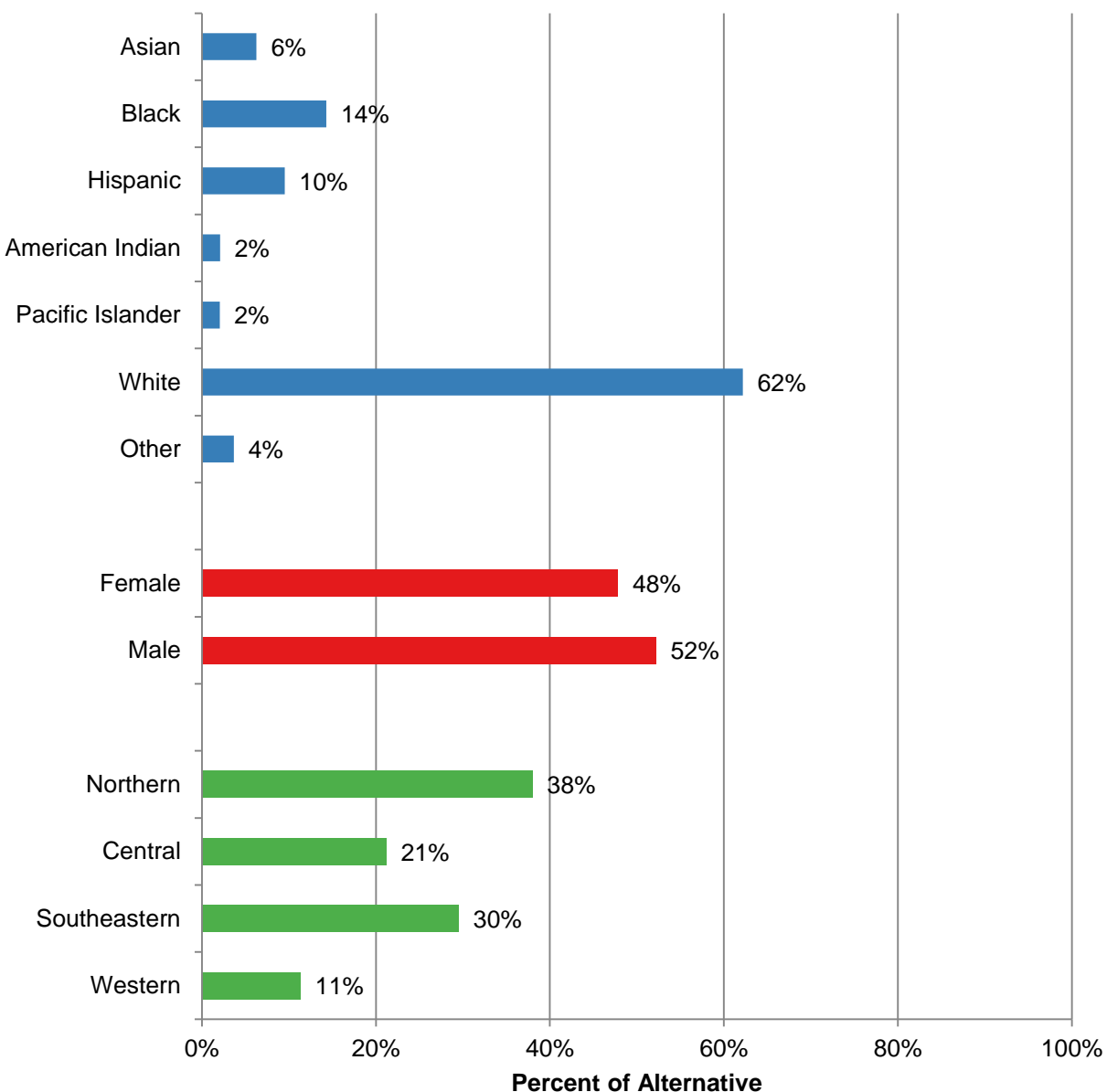
Figure 30. Demographic breakdown of Preppy.



Alternative Peer Crowd Demographics

Alternative youth were predominately white, nearly evenly split between males and females, and somewhat more likely to be in the Northern part of the state.

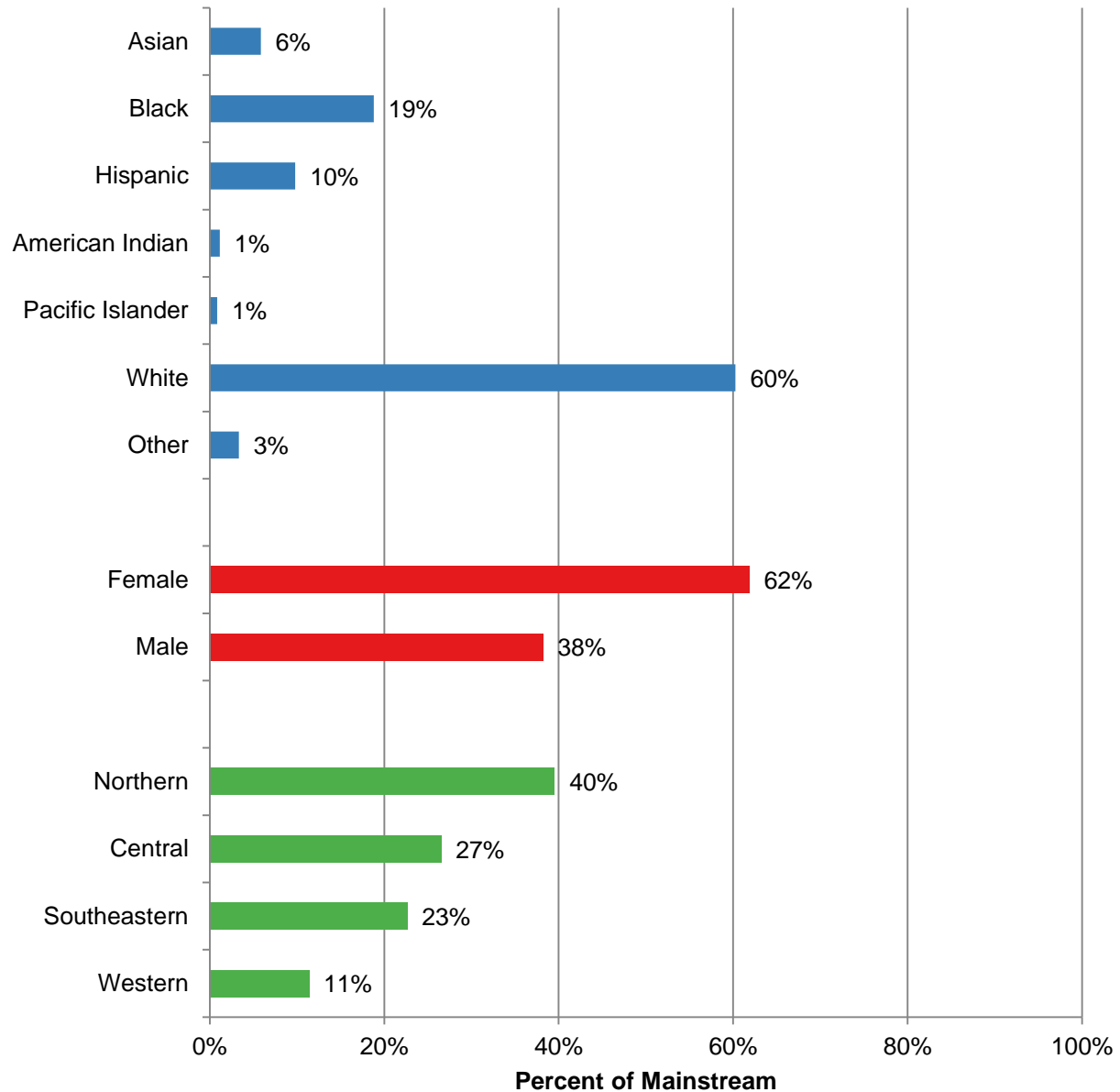
Figure 31. Demographic breakdown of Alternative.



Mainstream Peer Crowd Demographics

Although 60% of Mainstream youth were white, 19% were black and 10% Hispanic. Mainstream youth were generally more likely to be female and more likely to be in Northern Virginia.

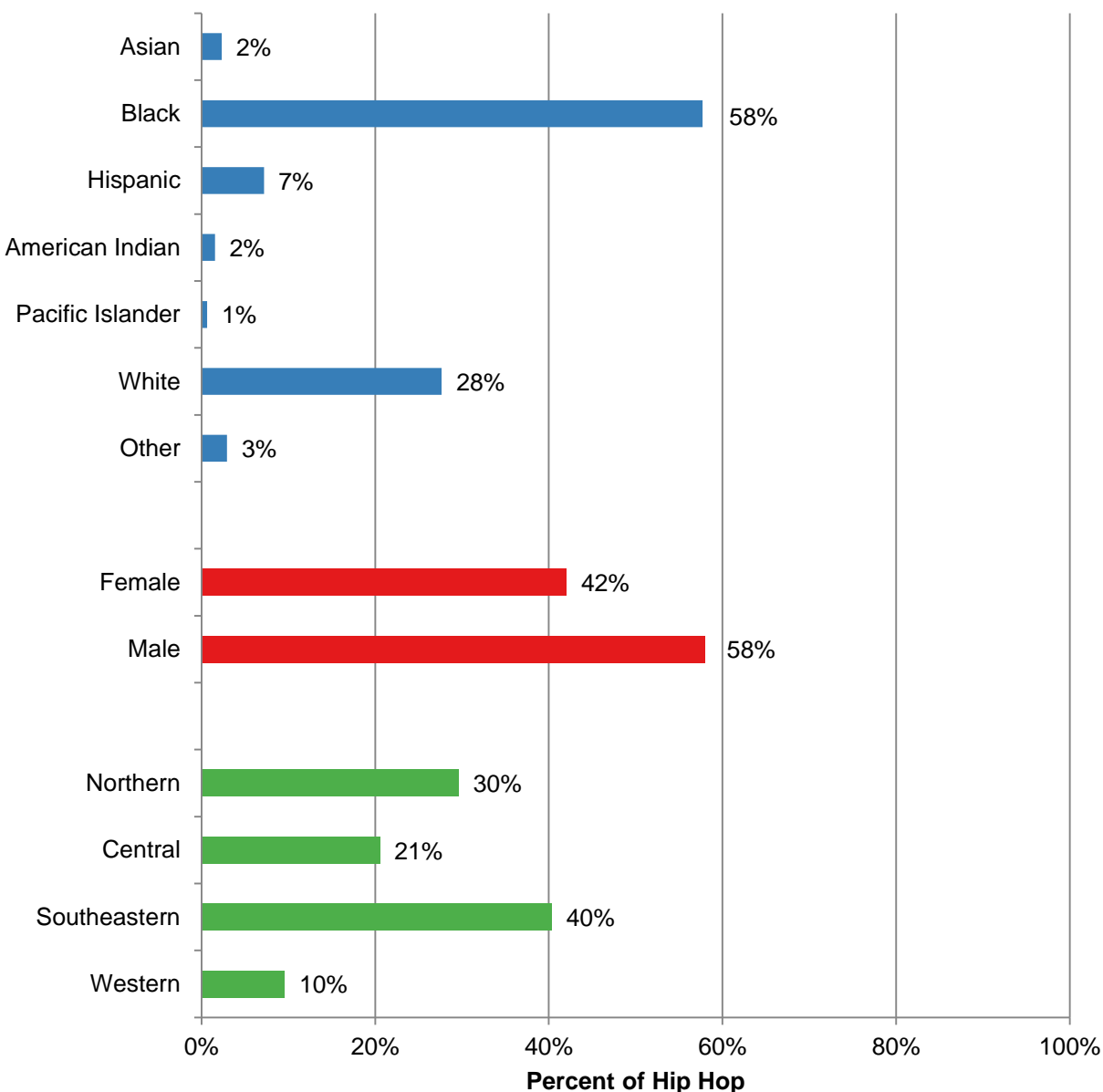
Figure 32. Demographic breakdown of Mainstream.



Hip Hop Peer Crowd Demographics

Although Hip Hop youth tended to be black, more than a quarter was white. Males were more likely than females to associate with Hip Hop, and Hip Hop youth were more likely to be in the Southeast than elsewhere.

Figure 33. Demographic breakdown of Hip Hop.

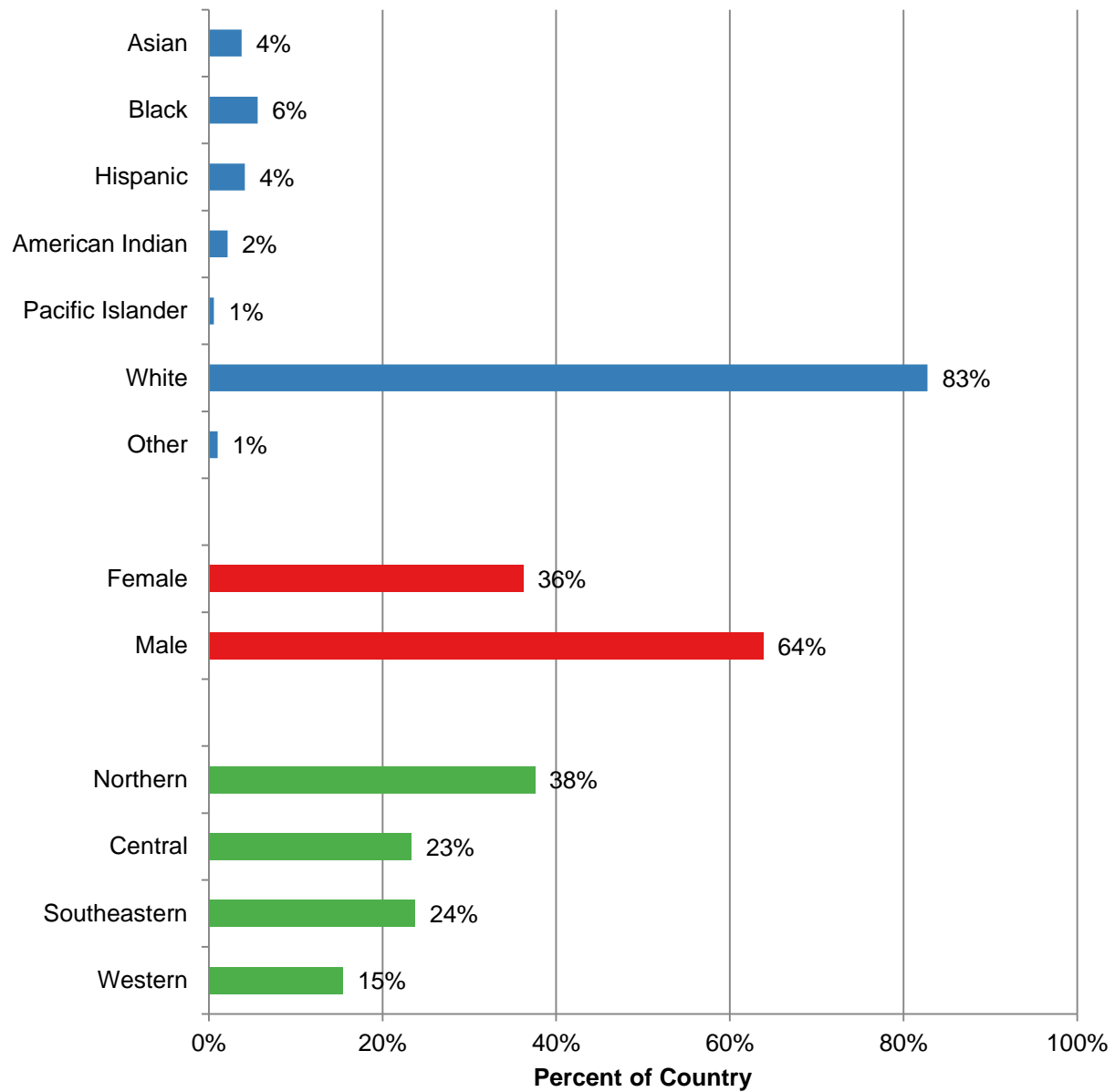


Country Peer Crowd Demographics

Country youth tended to be white, male, and live in the northern part of the state.



Figure 34. Demographic breakdown of Country.



Appendix: Survey and Weighting Methodology

School Recruitment

School recruitment began in the Spring of 2011 and ended in the Fall of 2011. During the summer separating the Spring and Fall terms, no schools were contacted. For each school sampled, Market Decisions' first contact was with the school division. The recruitment began with a detailed e-mail to all of the superintendents in the sampled school divisions. This communication pointed out key features and benefits of participating in the survey, the projected time to complete it and the logistics for survey administration at the school level. Our intent was to assure each superintendent that participating in the survey would result in a minimal loss of instructional time in the randomly selected classes from the 11th and 12th grade classes and that the tasks for the school coordinator were quite minimal. In addition, we attached several important documents to each e-mail which included: The I-Base Survey (IRB approved), Background and Significance (peer research on adolescent risk behavior involvement), Details on School Survey Administration, Parent Passive Permission Form, FAQ (frequently asked questions) and the Student Assent Script. These documents were sent to provide each superintendent with a perspective and a context on what the I-Base Survey effort entailed.

After this initial contact, calls were made by our Survey Coordinator to each superintendent of schools in the sample list to follow up on the e-mail that was sent. In the spring of 2011, two calls were made to each superintendent after the initial contact prior to sending a follow up e-mail. If there was no response to these requests an additional call was made and if there was still no response we did not pursue the matter any further. Several of the superintendents contacted during the Spring suggested that there was no time during that term to do the survey given other assessments and testing going on in their high schools. However, they recommended that we contact them the following term to see if there would be time to do the I-Base Survey without sacrificing instructional time within their schools.

For school recruitment in the Fall of 2011, Market Decisions modified this procedure to maximize effort to contact superintendents. Specifically, once the original e-mail was sent our survey coordinator would wait a few days and if a superintendent did not respond another reminder e-mail was sent with the original message attached. Following this initiative our survey coordinator phoned and spoke with the Superintendent or left a message if we were unable to speak directly to the Superintendent. After another few days, without an initial or follow up response, we sent another reminder forwarding the previous e-mails and once again requesting consideration of our request. In a number of instances this would finally result in a response. However, if there was no response after all of these efforts we did not initiate any further contact.

Once approval from the Superintendent was obtained the Survey Coordinator contacted the high school principal for the sampled school to gain their agreement to participate. We sent an e-mail communication to each school principal which included the basic information and attachments previously sent to their superintendent. The email stressed several points in a bulleted format detailing the survey time of completion-no more than 15 minutes, flexibility on when it could be done, the number of classes to be surveyed (8-10 classes), the sampling procedure, insuring confidentiality throughout the survey administration process, and a discussion about the ease of the survey administration process. We emphasized that the survey was designed in large part to minimize the loss of valuable instructional time.

Most principals were initially reluctant to consider participation despite their Superintendent's approval. This was the case when many reported that their 11th and 12th grade English classes were habitually over surveyed and many were doubtful that their teachers would be willing to participate. As an alternative to surveying English classes Market Decisions offered an option of using advisory classes. These classes meet sporadically but all of the 11th and 12th graders in each school participate in them. However, only one participating school used this alternative class sampling option. The Survey Coordinator continually reassured principals during the recruiting effort that the survey was easy to administer and accomplish. Many of them reported having a range of bad experiences with previous school survey administrations. We reassured them that the I-Base survey administration was an efficient process and confidentiality was strictly maintained. In addition, we urged school coordinators to communicate with English teachers to gauge their willingness to participate. In one case, the school coordinator, met with the entire English Department and explained the process and procedures. They voted as a group to participate and to use the honoraria for supplies for their department.

One district raised a concern with respect to the use of passive permission slips being sent home to the parents/guardians of participating students. The Gloucester Schools' Central Office insisted that we use an active permission process. In anticipation of low participation rates due to active consent, we tried to dissuade them from using this approach. As previous experiences had informed us, Gloucester High School had only a 41% actual participation rate on the I-Base survey at Gloucester High School while the average participation rate of all other schools was 83%. Fortunately, they were the only school division which required this approach.

We were able to recruit seven schools to participate in VFHY I-Base Survey in the Spring 2011 term with three schools in the South West Region, three in the Southeast Region, none from the Central Region and one in the Northern Region. The average number of communications (e-mail, phone, fax) from start to completion for these seven participating schools was 12 while the total number of communications to all 7 schools was 82 contacts. The highest number of communications was 14 contacts and the lowest 10. Contacts with non-participating schools were not tabulated for this report; however, they were extensive as indicated in the previous discussion of recruitment efforts.

In the spring 2011 recruiting cycle we dealt with several circumstances which mitigated against our gaining approval at the superintendent and school levels. All of the Virginia high schools were involved in SOL testing in the period between March and May, State testing took place in March and 25 high schools throughout Virginia were participating in the statewide YRBS. This level of testing in the high schools made it extremely difficult to gain approvals at both the superintendent and school levels. In a number of cases Market Decisions' Survey Coordinator was able to secure approval at the superintendent level but many principals in those districts refused to participate. This was primarily due to the amount of testing their students were dealing with during this time frame.

We used our holdover contacts from the Spring 2011 recruitment effort to ascertain approvals for the fall survey initiative. This effort began in late August and lasted into early September about a week after school had begun in each of the school districts within the sample. We had 10 superintendents who in the Spring 2011 term had requested we contact them in the fall about reconsidering participation in the survey. In addition, we had three schools in which the superintendent approved our survey request in early winter with two in the Northern Region and 1 in the Southwest Region. We had been contacting them throughout the Spring 2011 term at the principal level without being able to secure their agreement to participate. We continued this effort in the Fall of 2011 through mid-October after which we ceased attempts to gain

agreement from these particular schools to participate. We made an average of 22 contacts with each of these schools' (phone, e-mail and fax) principals without success.

Once we had exhausted the sample holdovers we began contacting additional schools in the sample. We were able to state emphatically to superintendents and principals that the survey took no more than 15 minutes to complete based on experiences in participating schools during the spring. After extensive efforts throughout the fall we were able to gain the cooperation of 14 schools to participate in the survey: three schools in the Southwest, two in the Southeast, five in the Central region and four in the Northern region. Nine of these school districts represented districts we had been in touch with since last winter and five had been initially contacted in the fall. We put more emphasis during the fall in securing the participation of schools in the Central and Northern regions of the state where we had only minimal success during the spring recruitment period.

The Fall 2011 contacts (phone, e-mail and fax) to recruit schools resulted in a total of 285 contacts with the 14 participating schools with an average number of contacts of 20. The highest number of contacts was 31 and the lowest was 12. The 31 contacts were with the Gloucester School district due to the negotiations with them in regard to their insistence that we use the active permission procedure with student participants in their high school. We did not tabulate the contacts made with school divisions which did not participate in the survey administration although they were extensive as mentioned previously.

We were able to secure seven schools in the Spring of 2011 and another 14 in the Fall of 2011 for a total of 21 schools participating in the 2011 VFHY I Base Survey. The participating schools by region are provided below with their recruitment period in parentheses.

<u>Southwest</u>	<u>Southeast</u>
Pound High (Spring)	York High (Spring)
Lebanon High (Spring)	West Point High (Spring)
Coeburn High (Spring)	Park View High (Spring)
Union High (Fall)	Churchland High (Fall)
Abingdon High (Fall)	Gloucester High (Fall)
Richlands High (Fall)	
<u>Central</u>	<u>Northern</u>
Robert E Lee High (Fall)	Forest Park High (Spring)
Harrisonburg High (Fall)	Battlefield High (Fall)
Amherst County High (Fall)	King George High (Fall)
Powhatan High (Fall)	Caroline High (Fall)
William Monroe High (Fall)	Osborn High (Fall)

Data Collection

After a principal agreed to participate in the Virginia I-Base Survey Market Decisions followed a number of procedures to facilitate the survey administration process. We asked each principal to appoint a school coordinator for the survey effort. Once this was clarified we sent a procedure sheet to the school coordinator explaining the need for the preparation of a class list of all 11th and 12th grade advisory or English classes. The Survey Coordinator also sent along a class list form and instructions for completion. Upon receipt of the class list we then drew a random sample of 8-10 classes from all those listed for participation in the survey administration. Upon completion of the classroom sampling we sent the school coordinator the classes selected for participation with the grade level, the name of the teacher, their room number and the total student enrollment. We asked the school coordinator to select a date for their survey administration and to contact the teachers about their selection for participation. We stressed in several communications throughout the process the importance of having the permission slips sent to parents/guardians of participating students at least 10 days prior to the date of the survey administration.

Market Decisions' Survey Coordinator and his team put together survey administration materials including coordinator instructions on survey administration, surveys and permissions slips in the quantity specified by the school coordinator (adding four additional copies in each packet) along with the ascent script for teachers and honoraria forms for the school coordinator to complete. We put all of these materials in a large box along with Fed Ex boxes and labels for returning completed surveys to Market Decisions. Market Decisions sent each school these materials via US mail with a delivery confirmation for arrival in 5 business days. Each school was also asked to call the Survey Coordinator once the survey material had arrived.

Once completed surveys were returned to Market Decisions the number of completes were counted and the number of classes completed were verified and compared to the honoraria forms submitted for payment of each school (\$500), school coordinator (\$100) and teachers (\$25 for each class in which they administered a survey). Completes were then data entered for use in tabulation of results.

Data Weighting

Data are weighted to adjust for non-response within stratification region and also to match the state profile of junior and senior high school students based upon region, race/ethnicity, gender, and grade in school. The weighting procedures involved two primary phases: non-response weighting adjustments and post-stratification weighting adjustments. Weighting was handled sequentially by adjusting for school and student non-response and then post-stratification adjustments to reflect the population based on region, race/ethnicity, gender, and grade in school. Population numbers were based on the most recent information about student enrollment and demographics available on the Virginia Department of Education's website at http://www.doe.virginia.gov/statistics_reports/enrollment/index.shtml. The following formulas illustrate the weighting procedure.

An initial sample weight was assigned to each record in the sample file. This base weight was equal to the inverse of the probability of selecting a school within each of the sampling regions. A non-response weighting adjustments was then made.

Non-Response Adjustments:

$$NRadj = 1 / RR_{region}$$

Where:

- $NRadj$ is the Nonresponse adjustment
- RR_{strata} is the response rate within the region

This adjustment was made to take into account non-response among schools and students. This was done so that the data accurately reflected the total population of students within each stratification area.

Post-Stratification Adjustments:

$$PSadj = \text{Number of Students}_{census} / (NRadj * \text{Number of Students}_{sample})$$

Where:

- $PSadj$ is the adjustment by region by race/ethnicity by gender by grade in school.
- $\text{Number of Students}_{census}$ is the total population from the VDOE student enrollment data within the region of a particular race/ethnicity, gender, and grade in school.
- $NRadj * \text{Number of Students}_{sample}$ is the number of respondents in the sample within the region of a particular race/ethnicity, gender, and grade in school weighted by the nonresponse adjustment.

This adjustment was made to take into account the number of students within a region relative to race/ethnicity, gender, and grade in school. This was done so that the data accurately reflected the total population of students within each region of a given race/ethnicity, gender, and grade in school.

Final Weight:

$$\text{Weight} = \text{Number of Students}_{census} / (PSadj * \text{Number of Students}_{sample})$$

Where:

- Weight is the final weight
- $\text{Number of Students}_{census}$ is the total population from the VDOE student enrollment data within the region of a particular race/ethnicity, gender, and grade in school.
- $PSadj * \text{Number of Students}_{sample}$ is the number of students in the sample within the region of a particular race/ethnicity, gender, and grade in school weighted by the post-stratification adjustment.

Post-stratification weighting adjustments were made iteratively until weighted counts closely matched counts calculated from the population data.

All percentages presented in this report reflect weighted percentages to produce more accurate population estimates from the collected sample data.