



Mental Health Disparities Among Youth in Iowa

Analysis of the Iowa Youth Survey (2014, 2016, 2018)



Authorship – Bureau of Public Health Performance

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Contents

Objectives	4
Methods	4
Data	4
Prevalence Statistics	4
Regression Analysis	5
Additional Information	5
Prevalence Statistics Results	6
Measure 1: During the past 12 months, did you ever feel so sad or hopeless almost every day for 2 weeks or more in a row that you stopped doing some usual activities?	6
Table 1a. Number of students who responded “Yes” by year and (gender, grade, or race).	6
Table 1b. Number of students who responded “Yes” by year, gender, and (grade or race).	7
Table 1c. Number of students who responded “Yes” by year, grade, and (gender or race).	8
Table 1d. Number of students who responded “Yes” by year, gender, grade, and race.	9
Figure 1. Proportion of students who responded “Yes” by year, gender, grade, and race.	10
Measure 2: During the past 12 months, have you thought about killing yourself?	11
Table 2a. Number of students who responded “Yes” by year	11
Table 2b. Number of students who responded “Yes” by year, gender, and (grade or race).	12
Table 2c. Number of students who responded “Yes” by year, grade, and (gender or race).	13
Table 2d. Number of students who responded “Yes” by year, gender, grade, and race.	14
Figure 2. Proportion of students who responded “Yes” by year, gender, grade, and race.	15
Measure 3: During the past 12 months, have you made a plan about how you would kill yourself?	16
Table 3a. Number of students who responded “Yes” by year	16
Table 3b. Number of students who responded “Yes” by year, gender, and (grade or race).	17
Table 3c. Number of students who responded “Yes” by year, grade, and (gender or race).	18
Table 3d. Number of students who responded “Yes” by year, gender, grade, and race.	19
Figure 3. Proportion of students who responded “Yes” by year, gender, grade, and race.	20
Measure 4: During the past 12 months, have you tried to kill yourself?	21
Table 4a. Number of students who responded “Yes” by year	21
Table 4b. Number of students who responded “Yes” by year, gender, and (grade or race).	22
Table 4c. Number of students who responded “Yes” by year, grade, and (gender or race).	23
Table 4d. Number of students who responded “Yes” by year, gender, grade, and race.	24
Figure 4. Proportion of students who responded “Yes” by year, gender, grade, and race.	25
Measure 5: If you attempted to kill yourself during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?	26
Table 5a. Number of students who responded “Yes” by year	26
Table 5b. Number of students who responded “Yes” by year, gender, and (grade or race).	27
Table 5c. Number of students who responded “Yes” by year, grade, and (gender or race).	28
Table 5d. Number of students who responded “Yes” by year, gender, grade, and race.	29
Figure 5. Proportion of students who responded “Yes” by year, gender, grade, and race.	30
Regression Analysis Results	31
Figure 6. Race and gender main effects odds ratios and 95% confidence intervals for students who responded “Yes”	31
Figure 7. Race and gender interaction effects odds ratios and 95% confidence intervals for Hispanic or Latino vs. White students who responded “Yes”	32
Figure 8. Race and gender interaction effects odds ratios and 95% confidence intervals for Black or African American vs. White students who responded “Yes”	33
Figure 9. Race and gender interaction effects odds ratios and 95% confidence intervals for American Indian or Alaska Native vs. White students who responded “Yes”	34
Figure 10. Race and gender interaction effects odds ratios and 95% confidence intervals for Asian or Pacific Islander vs. White students who responded “Yes”	35
Figure 11. Race and gender interaction effects odds ratios and 95% confidence intervals for Mixed or Multiple Races vs. White students who responded “Yes”	36

Figure 12. Race and gender interaction effects odds ratios and 95% confidence intervals for Other Race vs. White students who responded “Yes”	37
Prevalence Statistics Discussion	38
Case Points of Discussion and Inference	38
Regression Analysis Discussion	40
Main Effect Models	40
Case Points of Discussion and Inference	40
Interaction Effect Models	40
Case Points of Discussion and Inference	40
Limitations	42
Appendix	43
IYS Response and Statewide Enrollment Counts	43
Table A1. Number of IYS responses and students enrolled by year and (gender, grade, or race). . . .	43
Table A2. Number of IYS responses and students enrolled by year, gender, and grade.	44
Table A3. Number of IYS responses and students enrolled by year, grade, and race.	45
Table A4. Number of IYS responses and students enrolled by year, gender, and race.	47
Table A5. Number of IYS responses and students enrolled by year, gender, grade, and race.	48

Objectives

The purpose of this report is to inform our understanding of youth health disparities in Iowa using data from the Iowa Youth Survey (IYS) years 2014, 2016, and 2018. The key questions are:

1. What statewide health disparities exist by gender?
2. What statewide health disparities exist by race/ethnicity?
3. For significant existing health disparities, what is the trend from 2014-2018?

The focus of this report is on Mental Health Status among youth.

These analyses will be used to describe existing and persistent mental health disparities in Iowa youth. This understanding can drive data-informed planning, outreach and evaluation to reduce health disparities and achieve health equity for Iowa youth through public health initiatives, health services, and education.

Methods

Data

The following tables, figures, and analyses use data from the 2014, 2016, and 2018 Iowa Youth Survey and focus on five questions, or measures, on mental health.

Response Compared to Enrollment: All counts are as reported in the IYS; no survey responses were weighted. The number of students who responded to the IYS against the number of students who were enrolled statewide by year, grade, gender, and race can be found in Appendix A.

Missing or No Response: The “No response” category for the descriptive demographic characteristics (grade, gender, and race) are not shown in the tables or figures. However, all students who responded to a question of interest are still included in the overall count or analysis. For this reason, the number of responses by demographic category may not sum to the overall counts or match the proportion reported in the IYS. The full counts including “No Response” can be found in Appendix A.

Race and Ethnicity: The race category Hispanic includes all students who identified as Hispanic or Latino. All other race categories represent those students who did not identify as Hispanic or Latino.

Race Categories: Note in 2014 and 2016, the Asian or Pacific Islander race category included: Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, Native Hawaiian, Guamanian or Chamorro, Samoan, Other Asian, and Other Pacific Islander. In 2018, two separate race categories were identified: Asian and Native Hawaiian or Other Pacific Islander.

Skip Questions: Some questions are designated “skip” questions and are denoted as such in the footnotes (§). If a student responded “No” to the previous question, then they were not prompted to answer the question and a default answer of “No” was entered. To better understand the proportion of students who responded “Yes” to these questions, proportions for skip questions are reported only out of those students who were prompted to answer the question. This method and the resulting proportions differ from the IYS statewide reports.

Prevalence Statistics

The prevalence tables give the number of students who responded “Yes” to a particular question in the 2014, 2016, and 2018 Iowa Youth Surveys by varying combinations of descriptive demographic characteristics: year, gender, grade, and race. Tables (a) provide overall counts and proportions for the survey and by single characteristics by year. Tables (b) and (c) provide counts and proportions for the interaction of two characteristics by year. Tables (d) and the figures show the full interactions of year, gender, grade, and race.

All proportions are given as the percentage of students who responded “Yes” out of all students who responded to that particular question. The number of students who responded to each question and the proportion it represents of the total number of IYS respondents for that year is given below each table and figure. The respective question

section and number is also included below. All percentages are rounded; “0%” appearing in any column represents anything less than 0.5% (including zero). Due to rounding, percentages may not add up to exactly 100%.

Confidentiality of students: Prevalence counts less than or equal to five and their corresponding proportions will be suppressed (**) in the prevalence statistics results and appendix tables to protect the confidentiality of the students.

Regression Analysis

Logistic regression analysis is used to determine the odds of a student responding “Yes” to the given IYS question for the effects of race (White, Hispanic or Latino, Black or African American, American Indian or Alaska Native, Asian or Pacific Islander, Mixed or Multiple Races, Other, No Response) and gender (Male, Female, No Response) while controlling for year (2014, 2016, 2018) and grade (6th, 8th, 11th, No Response). Odds ratios and 95% confidence intervals are reported for each question using the White race category and Male gender category as reference. White and Male were chosen as the reference as these have the lowest prevalence of mental health measure rates, are the majority group in Iowa students, and have been the presumptive norm in understanding and planning for mental health services in the United States.

Main effect models: The main effect models for each of the questions (outcomes) included race and gender as main effects while controlling for year and grade. Odds ratio estimates and their 95% confidence intervals are reported for the gender effect (Female vs. Male) and the race effects (Hispanic or Latino vs. White, Black or African American vs. White, etc...).

Interaction effect models: The interaction effect models for each of the questions (outcomes) included an interaction term between race and gender while controlling for year and grade. Odds ratio estimates and their 95% confidence intervals are reported for (i) the gender effect within race (e.g. Hispanic or Latino Females vs. Hispanic or Latino Males), (ii) the race effect in females (e.g. Hispanic or Latino Females vs. White Females), (iii) the race effect in males (e.g. Hispanic or Latino Males vs. White Males), and the race and gender interaction effects (iv-v) (e.g. Hispanic or Latino Females vs. White Males and Hispanic or Latino Males vs. White Females).

Missing or No Response: Odds ratios are not reported for the No Response categories while they are controlled for in the model. This is done for multiple reasons including small sample sizes which inflate the standard error of the estimates and the uncertainty concerning which students are captured in the No Response category.

Race Categories: Note in 2014 and 2016, the Asian and Native Hawaiian or Pacific Islander race category included: Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, Native Hawaiian, Guamanian or Chamorro, Samoan, Other Asian, and Other Pacific Islander. In 2018, two separate race categories were identified: Asian and Native Hawaiian or Other Pacific Islander. In the regression analysis, race was modeled as in the 2014 and 2016 surveys with Asian and Native Hawaiian or Other Pacific Islander as a single race category.

Additional Information

More information about the Iowa Youth Survey, including background, data collection, and data cleaning can be found here: <https://iowayouthsurvey.idph.state.ia.us/>.

Inquires can be made to:

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Bureau of Public Health Performance
Iowa Department of Public Health

Prevalence Statistics Results

Measure 1: During the past 12 months, did you ever feel so sad or hopeless almost every day for 2 weeks or more in a row that you stopped doing some usual activities?

Table 1a. Number of students who responded “Yes” by year and (gender, grade, or race).

During the past 12 months, did you ever feel so sad or hopeless almost every day for 2 weeks or more in a row that you stopped doing some usual activities?
n (%)^{*}

		2014	2016	2018
Overall		12979 (17)	14672 (17)	17228 (24)
Gender	Male	4467 (12)	5004 (12)	6242 (17)
	Female	8441 (22)	9567 (23)	10840 (32)
Grade	6th	3110 (12)	3727 (13)	4646 (19)
	8th	4357 (17)	4614 (16)	5806 (24)
	11th	5464 (22)	6279 (24)	6716 (32)
Race	White †	9624 (16)	10287 (16)	11598 (23)
	Hispanic/Latino	287 (17)	1402 (21)	2791 (32)
	Black/African American †	596 (19)	730 (17)	855 (25)
	American Indian/Alaska Native †	181 (26)	188 (24)	163 (35)
	Asian †	1032 (21)	443 (18)	489 (25)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	78 (32)
	Mixed/Multiple Races †	1008 (24)	1316 (24)	903 (32)
	Other Race †	195 (23)	221 (22)	262 (30)

^{*} Out of the number of students [n(%)] who answered this question: 2014 [B65, 75792 (98)], 2016 [B67, 80931 (96)], and 2018 [B62, 68441 (97)].

^{**} Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Table 1b. Number of students who responded “Yes” by year, gender, and (grade or race).

During the past 12 months, did you ever feel so sad or hopeless almost every day for 2 weeks or more in a row that you stopped doing some usual activities?
n (%)*

		2014		2016		2018	
		Male	Female	Male	Female	Male	Female
Overall		4467 (12)	8441 (22)	5004 (12)	9567 (23)	6242 (17)	10840 (32)
Grade	6th	1372 (10)	1719 (13)	1583 (11)	2121 (15)	1951 (15)	2646 (22)
	8th	1268 (10)	3067 (24)	1393 (9)	3173 (23)	1921 (16)	3831 (33)
	11th	1814 (15)	3626 (30)	2000 (15)	4252 (34)	2351 (22)	4328 (42)
Race	White †	3247 (11)	6339 (21)	3485 (11)	6744 (22)	4172 (16)	7349 (29)
	Hispanic/Latino	114 (14)	171 (20)	468 (14)	929 (29)	974 (23)	1790 (41)
	Black/African American †	226 (13)	366 (25)	272 (12)	456 (24)	314 (18)	537 (34)
	American Indian/Alaska Native †	76 (20)	105 (33)	70 (16)	116 (33)	60 (24)	103 (48)
	Asian †	323 (13)	699 (28)	161 (13)	278 (22)	182 (19)	305 (31)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	41 (29)	37 (36)
	Mixed/Multiple Races †	361 (17)	639 (30)	407 (15)	890 (32)	338 (23)	552 (40)
	Other Race †	93 (20)	100 (27)	100 (18)	120 (27)	133 (28)	122 (33)

* Out of the number of students [n(%)] who answered this question: 2014 [B65, 75792 (98)], 2016 [B67, 80931 (96)], and 2018 [B62, 68441 (97)].

** Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonresponse in the demographic data.

Table 1c. Number of students who responded “Yes” by year, grade, and (gender or race).

During the past 12 months, did you ever feel so sad or hopeless almost every day for 2 weeks or more in a row that you stopped doing some usual activities?
n (%)*

		2014			2016			2018		
		6th	8th	11th	6th	8th	11th	6th	8th	11th
Overall		3110 (12)	4357 (17)	5464 (22)	3727 (13)	4614 (16)	6279 (24)	4646 (19)	5806 (24)	6716 (32)
Gender	Male	1372 (10)	1814 (15)	3067 (24)	1583 (11)	2000 (15)	3173 (23)	1951 (15)	2351 (22)	3831 (33)
	Female	1268 (10)	1719 (13)	3626 (30)	1393 (9)	2121 (15)	4252 (34)	1921 (16)	2646 (22)	4328 (42)
Race	White †	2143 (11)	3116 (15)	4333 (22)	2326 (11)	3178 (15)	4754 (24)	2834 (16)	3751 (21)	4974 (31)
	Hispanic/Latino	73 (13)	96 (17)	117 (22)	406 (17)	468 (20)	522 (28)	849 (27)	1015 (33)	920 (38)
	Black/African American †	199 (17)	218 (19)	176 (20)	253 (16)	226 (15)	247 (22)	270 (21)	315 (27)	267 (31)
	American Indian/Alaska Native †	65 (21)	63 (26)	53 (33)	70 (19)	68 (26)	49 (30)	54 (28)	63 (38)	46 (45)
	Asian †	267 (15)	403 (23)	359 (26)	124 (15)	135 (16)	182 (23)	121 (19)	174 (26)	194 (31)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	—	—	30 (34)	23 (29)	25 (33)
	Mixed/Multiple Races †	265 (18)	382 (24)	356 (31)	404 (19)	461 (24)	447 (31)	318 (27)	347 (33)	234 (39)
	Other Race †	64 (17)	68 (29)	62 (26)	93 (20)	65 (22)	59 (24)	120 (27)	99 (35)	42 (30)

* Out of the number of students [n(%)] who answered this question: 2014 [B65, 75792 (98)], 2016 [B67, 80931 (96)], and 2018 [B62, 68441 (97)].

** Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Table 1d. Number of students who responded “Yes” by year, gender, grade, and race.

During the past 12 months, did you ever feel so sad or hopeless almost every day for 2 weeks or more in a row that you stopped doing some usual activities?
n (%)^{*}

Grade	Race	2014		2016		2018	
		Male	Female	Male	Female	Male	Female
6th	White †	947 (9)	1188 (12)	1031 (10)	1282 (13)	1211 (14)	1602 (19)
	Hispanic/Latino	34 (12)	39 (15)	146 (13)	259 (21)	327 (21)	509 (31)
	Black/African American †	85 (14)	112 (21)	109 (13)	143 (19)	113 (16)	155 (26)
	American Indian/Alaska Native †	33 (19)	32 (24)	28 (14)	41 (25)	16 (15)	38 (43)
	Asian †	114 (13)	151 (18)	48 (12)	76 (18)	47 (15)	72 (24)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	16 (34)	14 (33)
	Mixed/Multiple Races †	109 (15)	152 (20)	152 (14)	247 (24)	134 (22)	179 (32)
	Other Race †	29 (16)	34 (19)	39 (17)	54 (23)	64 (27)	52 (27)
8th	White †	868 (8)	2233 (22)	949 (9)	2198 (21)	1215 (13)	2503 (29)
	Hispanic/Latino	34 (12)	61 (21)	149 (12)	316 (28)	337 (22)	669 (44)
	Black/African American †	78 (13)	139 (27)	73 (9)	152 (25)	105 (17)	209 (37)
	American Indian/Alaska Native †	23 (18)	40 (37)	26 (18)	42 (38)	28 (31)	35 (46)
	Asian †	105 (12)	295 (33)	49 (11)	82 (20)	63 (20)	111 (32)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	15 (33)	8 (26)
	Mixed/Multiple Races †	122 (15)	259 (33)	116 (13)	337 (34)	113 (22)	229 (43)
	Other Race †	34 (25)	34 (35)	26 (16)	39 (31)	43 (28)	53 (42)
11th	White †	1423 (14)	2897 (29)	1487 (14)	3253 (33)	1736 (21)	3215 (41)
	Hispanic/Latino	45 (17)	71 (26)	170 (19)	352 (38)	307 (26)	608 (49)
	Black/African American †	62 (13)	113 (30)	89 (15)	158 (31)	94 (21)	172 (41)
	American Indian/Alaska Native †	20 (24)	33 (45)	16 (19)	32 (43)	16 (29)	30 (62)
	Asian †	102 (15)	252 (36)	63 (17)	119 (29)	72 (25)	122 (38)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	10 (22)	15 (48)
	Mixed/Multiple Races †	130 (22)	223 (41)	137 (20)	304 (42)	88 (30)	143 (48)
	Other Race †	30 (20)	32 (38)	32 (20)	26 (32)	25 (28)	17 (35)

^{*} Out of the number of students [n(%)] who answered this question: 2014 [B65, 75792 (98)], 2016 [B67, 80931 (96)], and 2018 [B62, 68441 (97)].

^{**} Counts < 6 suppressed to protect student confidentiality.

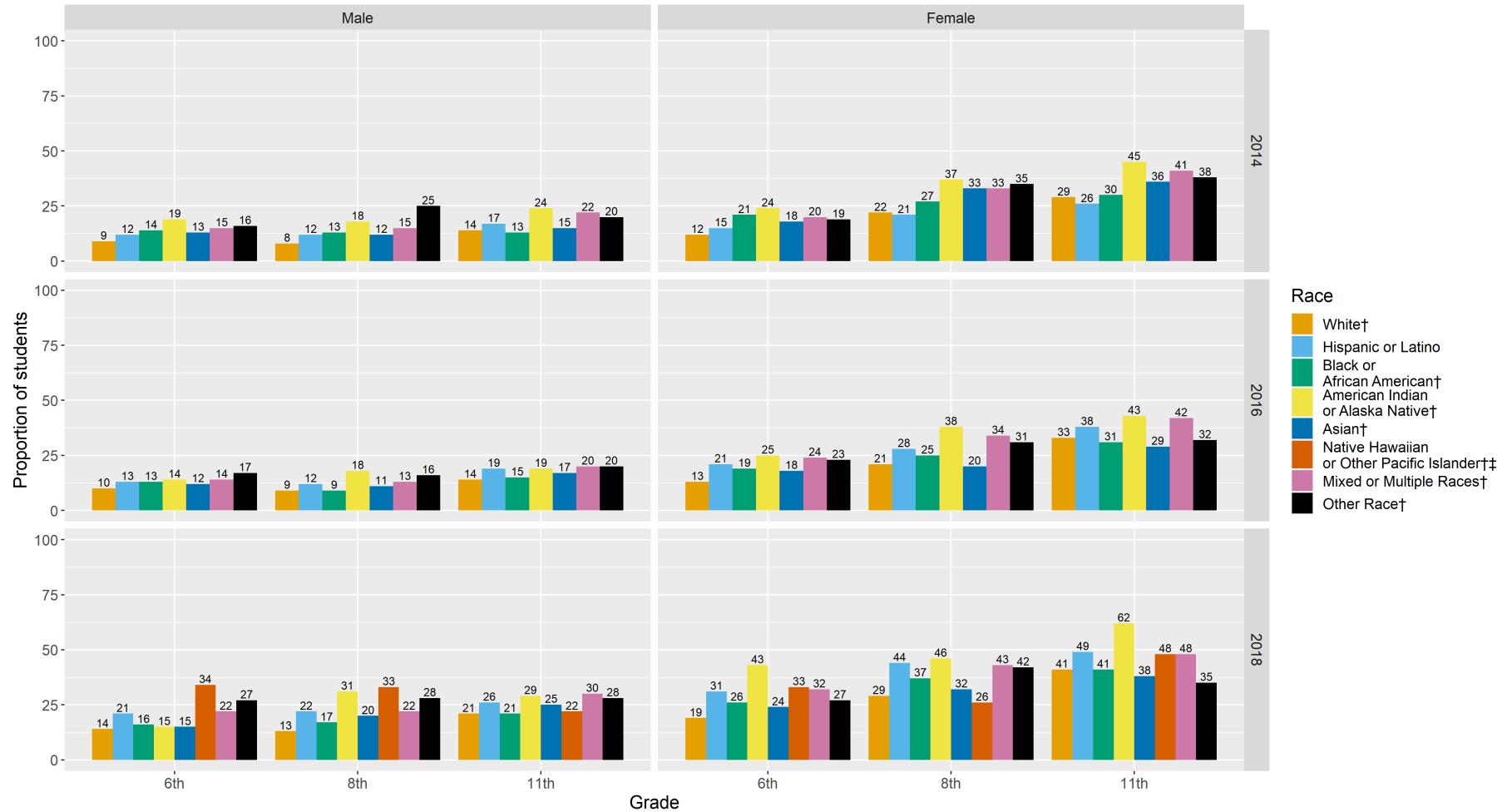
† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonresponse in the demographic data.

Figure 1. Proportion of students who responded “Yes” by year, gender, grade, and race.

During the past 12 months, did you ever feel so sad or hopeless almost every day for 2 weeks or more in a row that you stopped doing some usual activities? n (%)*



* Out of the number of students [n(%)] who answered this question: 2014 [B65, 75792, (98)], 2016 [B67, 80931 (96)], and 2018 [B62, 68441 (97)].

** Counts < 6 suppressed to protect student confidentiality.

†Non-Hispanic

‡The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Measure 2: During the past 12 months, have you thought about killing yourself?

Table 2a. Number of students who responded “Yes” by year

During the past 12 months, have you thought about killing yourself? n (%)*

		2014	2016	2018
Overall		9912 (13)	10690 (13)	14478 (21)
Gender	Male	3498 (9)	3860 (9)	5512 (15)
	Female	6363 (17)	6742 (16)	8823 (26)
Grade	6th	2216 (9)	2699 (9)	3676 (15)
	8th	3819 (14)	3733 (13)	5406 (22)
	11th	3833 (16)	4225 (16)	5346 (26)
Race	White †	7407 (12)	7553 (12)	10055 (20)
	Hispanic/Latino	240 (14)	849 (13)	2041 (23)
	Black/African American †	446 (14)	567 (14)	683 (20)
	American Indian/Alaska Native †	149 (21)	144 (18)	137 (30)
	Asian †	644 (13)	323 (13)	453 (24)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	58 (24)
	Mixed/Multiple Races †	832 (19)	1026 (19)	798 (28)
	Other Race †	155 (18)	175 (17)	182 (21)

* Out of the number of students [n(%)] who answered this question: 2014 [B66, 75613 (98)], 2016 [B68, 80526 (95)], and 2018 [B63, 67990 (97)].

** Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Table 2b. Number of students who responded “Yes” by year, gender, and (grade or race).

During the past 12 months, have you thought about killing yourself? n (%)^{*}

		2014		2016		2018	
		Male	Female	Male	Female	Male	Female
Overall		3498 (9)	6363 (17)	3860 (9)	6742 (16)	5512 (15)	8823 (26)
Grade	6th	1011 (8)	1194 (9)	1171 (8)	1506 (11)	1551 (12)	2078 (17)
	8th	1107 (8)	2691 (21)	1154 (8)	2536 (18)	1888 (15)	3460 (29)
	11th	1367 (11)	2450 (21)	1518 (12)	2686 (21)	2056 (19)	3259 (32)
Race	White †	2622 (9)	4757 (16)	2772 (9)	4729 (15)	3846 (15)	6129 (24)
	Hispanic/Latino	90 (11)	147 (18)	271 (8)	574 (18)	711 (17)	1307 (30)
	Black/African American †	162 (10)	283 (20)	228 (10)	336 (18)	255 (14)	424 (27)
	American Indian/Alaska Native †	58 (15)	91 (29)	53 (12)	90 (25)	50 (20)	86 (40)
	Asian †	183 (8)	454 (18)	120 (10)	201 (16)	178 (19)	273 (28)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	27 (19)	31 (30)
	Mixed/Multiple Races †	294 (14)	533 (25)	306 (11)	702 (26)	330 (23)	457 (33)
	Other Race †	69 (15)	85 (23)	84 (15)	88 (20)	88 (18)	88 (24)

^{*} Out of the number of students [n(%)] who answered this question: 2014 [B66, 75613 (98)], 2016 [B68, 80526 (95)], and 2018 [B63, 67990 (97)].

^{**} Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Table 2c. Number of students who responded “Yes” by year, grade, and (gender or race).

During the past 12 months, have you thought about killing yourself? n (%)*

		2014			2016			2018		
		6th	8th	11th	6th	8th	11th	6th	8th	11th
Overall		2216 (9)	3819 (14)	3833 (16)	2699 (9)	3733 (13)	4225 (16)	3676 (15)	5406 (22)	5346 (26)
Gender	Male	1011 (8)	1367 (11)	2691 (21)	1171 (8)	1518 (12)	2536 (18)	1551 (12)	2056 (19)	3460 (29)
	Female	1107 (8)	1194 (9)	2450 (21)	1154 (8)	1506 (11)	2686 (21)	1888 (15)	2078 (17)	3259 (32)
Race	White †	1539 (8)	2786 (13)	3055 (15)	1726 (8)	2604 (12)	3201 (16)	2275 (13)	3640 (21)	4109 (26)
	Hispanic/Latino	61 (11)	91 (16)	86 (16)	241 (10)	302 (13)	304 (17)	605 (19)	807 (26)	623 (26)
	Black/African American †	135 (12)	176 (16)	131 (15)	202 (13)	188 (13)	175 (16)	234 (18)	279 (23)	169 (19)
	American Indian/Alaska Native †	44 (14)	57 (24)	47 (29)	51 (14)	55 (21)	38 (23)	46 (24)	57 (34)	34 (33)
	Asian †	147 (9)	287 (16)	208 (15)	81 (10)	112 (13)	130 (17)	123 (20)	176 (26)	154 (25)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	—	—	21 (24)	20 (26)	17 (22)
	Mixed/Multiple Races †	218 (15)	355 (22)	254 (22)	294 (14)	415 (22)	315 (22)	269 (23)	334 (31)	191 (32)
	Other Race †	50 (13)	58 (25)	46 (19)	74 (16)	48 (16)	50 (20)	68 (16)	75 (26)	38 (28)

* Out of the number of students [n(%)] who answered this question: 2014 [B66, 75613 (98)], 2016 [B68, 80526 (95)], and 2018 [B63, 67990 (97)].

** Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Table 2d. Number of students who responded “Yes” by year, gender, grade, and race.

During the past 12 months, have you thought about killing yourself? n (%)*

Grade	Race	2014		2016		2018	
		Male	Female	Male	Female	Male	Female
6th	White †	725 (7)	808 (8)	797 (7)	917 (9)	964 (11)	1290 (15)
	Hispanic/Latino	33 (12)	28 (10)	77 (7)	164 (14)	227 (15)	366 (23)
	Black/African American †	55 (9)	79 (14)	86 (10)	113 (15)	101 (15)	131 (22)
	American Indian/Alaska Native †	22 (13)	22 (17)	21 (11)	29 (17)	17 (16)	28 (31)
	Asian †	51 (6)	94 (11)	30 (7)	51 (12)	53 (17)	68 (23)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	9 (19)	12 (29)
	Mixed/Multiple Races †	93 (13)	124 (16)	109 (10)	180 (17)	128 (21)	136 (24)
	Other Race †	19 (10)	31 (17)	35 (15)	39 (17)	32 (14)	33 (17)
8th	White †	800 (8)	1972 (19)	817 (7)	1755 (16)	1293 (14)	2307 (27)
	Hispanic/Latino	28 (10)	61 (21)	85 (7)	216 (19)	255 (16)	545 (36)
	Black/African American †	61 (10)	115 (22)	70 (8)	118 (19)	89 (14)	190 (34)
	American Indian/Alaska Native †	17 (13)	40 (37)	21 (14)	34 (31)	20 (22)	37 (49)
	Asian †	66 (8)	219 (24)	44 (10)	66 (16)	63 (20)	113 (33)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	9 (20)	11 (35)
	Mixed/Multiple Races †	102 (13)	251 (32)	96 (11)	312 (32)	123 (24)	207 (39)
	Other Race †	29 (22)	29 (30)	18 (11)	29 (23)	31 (20)	41 (32)
11th	White †	1090 (11)	1957 (20)	1145 (11)	2048 (21)	1579 (19)	2511 (32)
	Hispanic/Latino	28 (11)	57 (21)	109 (12)	193 (21)	226 (19)	393 (32)
	Black/African American †	44 (9)	87 (23)	71 (12)	104 (21)	64 (14)	103 (25)
	American Indian/Alaska Native †	18 (21)	29 (39)	11 (13)	27 (36)	13 (24)	21 (44)
	Asian †	64 (9)	141 (20)	46 (12)	84 (21)	62 (21)	92 (28)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	9 (20)	8 (26)
	Mixed/Multiple Races †	99 (17)	153 (28)	101 (15)	208 (29)	77 (26)	112 (37)
	Other Race †	21 (14)	25 (29)	29 (18)	19 (23)	24 (27)	14 (29)

* Out of the number of students [n(%)] who answered this question: 2014 [B66, 75613 (98)], 2016 [B68, 80526 (95)], and 2018 [B63, 67990 (97)].

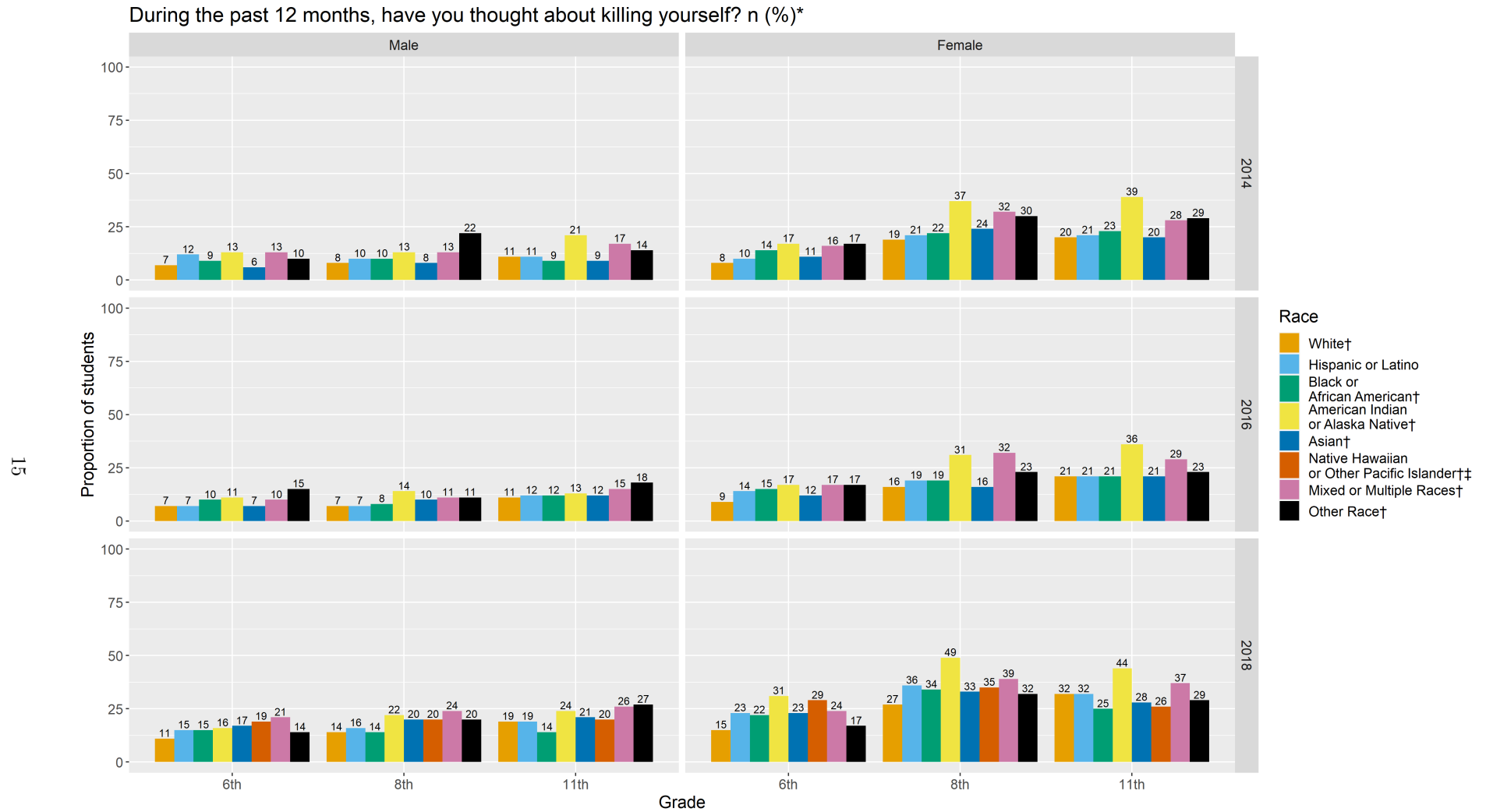
** Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonresponse in the demographic data.

Figure 2. Proportion of students who responded “Yes” by year, gender, grade, and race.



* Out of the number of students [n(%)] who answered this question: 2014 [B66, 75613, (98)], 2016 [B68, 80526 (95)], and 2018 [B63, 67990 (97)].

** Counts < 6 suppressed to protect student confidentiality.

†Non-Hispanic

‡The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Measure 3: During the past 12 months, have you made a plan about how you would kill yourself?

Table 3a. Number of students who responded “Yes” by year

During the past 12 months, have you made a plan about how you would kill yourself? n (%)^{*}

		2014	2016	2018
Overall		5984 (8)	6343 (7)	6922 (10)
Gender	Male	2119 (5)	2308 (5)	2582 (7)
	Female	3834 (10)	3967 (10)	4256 (12)
Grade	6th	1086 (4)	1349 (5)	1548 (6)
	8th	2401 (9)	2320 (8)	2719 (11)
	11th	2468 (10)	2656 (10)	2628 (13)
Race	White †	4416 (7)	4378 (7)	4568 (9)
	Hispanic/Latino	130 (8)	532 (8)	1100 (13)
	Black/African American †	280 (9)	355 (8)	381 (11)
	American Indian/Alaska Native †	100 (14)	85 (11)	79 (17)
	Asian †	385 (8)	217 (9)	214 (11)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	32 (13)
	Mixed/Multiple Races †	545 (13)	631 (12)	401 (14)
	Other Race †	103 (12)	113 (11)	115 (13)

^{*} Out of the number of students [n(%)] who answered this question: 2014 [B67, 75697 (98)], 2016 [B69, 80582 (95)], and 2018 [B64, 68188 (97)].

^{**} Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Table 3b. Number of students who responded “Yes” by year, gender, and (grade or race).

During the past 12 months, have you made a plan about how you would kill yourself? n (%)*

		2014		2016		2018	
		Male	Female	Male	Female	Male	Female
Overall		2119 (5)	3834 (10)	2308 (5)	3967 (10)	2582 (7)	4256 (12)
Grade	6th	500 (4)	578 (5)	565 (4)	769 (5)	646 (5)	873 (7)
	8th	687 (5)	1702 (13)	713 (5)	1579 (11)	897 (7)	1787 (15)
	11th	925 (8)	1535 (13)	1023 (8)	1612 (13)	1029 (10)	1583 (15)
Race	White †	1567 (5)	2833 (9)	1612 (5)	2728 (9)	1710 (7)	2819 (11)
	Hispanic/Latino	50 (6)	77 (9)	166 (5)	361 (11)	387 (9)	697 (16)
	Black/African American †	96 (6)	182 (13)	145 (6)	209 (11)	140 (8)	239 (15)
	American Indian/Alaska Native †	35 (9)	65 (21)	30 (7)	54 (15)	28 (11)	51 (24)
	Asian †	119 (5)	262 (11)	87 (7)	127 (10)	82 (9)	129 (13)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	13 (9)	19 (18)
	Mixed/Multiple Races †	195 (9)	349 (17)	195 (7)	425 (15)	157 (11)	237 (17)
	Other Race †	43 (9)	59 (16)	59 (11)	51 (11)	56 (12)	53 (14)

* Out of the number of students [n(%)] who answered this question: 2014 [B67, 75697 (98)], 2016 [B69, 80582 (95)], and 2018 [B64, 68188 (97)].

** Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Table 3c. Number of students who responded “Yes” by year, grade, and (gender or race).

During the past 12 months, have you made a plan about how you would kill yourself? n (%)*

		2014			2016			2018		
		6th	8th	11th	6th	8th	11th	6th	8th	11th
Overall		1086 (4)	2401 (9)	2468 (10)	1349 (5)	2320 (8)	2656 (10)	1548 (6)	2719 (11)	2628 (13)
Gender	Male	500 (4)	925 (8)	1702 (13)	565 (4)	1023 (8)	1579 (11)	646 (5)	1029 (10)	1787 (15)
	Female	687 (5)	578 (5)	1535 (13)	713 (5)	769 (5)	1612 (13)	897 (7)	873 (7)	1583 (15)
Race	White †	713 (4)	1733 (8)	1950 (10)	801 (4)	1579 (7)	1987 (10)	842 (5)	1741 (10)	1972 (12)
	Hispanic/Latino	28 (5)	51 (9)	51 (9)	130 (6)	206 (9)	195 (11)	315 (10)	446 (14)	336 (14)
	Black/African American †	80 (7)	110 (10)	88 (10)	113 (7)	132 (9)	109 (10)	126 (10)	160 (13)	93 (11)
	American Indian/Alaska Native †	28 (9)	38 (16)	34 (21)	26 (7)	33 (13)	26 (16)	24 (12)	37 (22)	18 (17)
	Asian †	71 (4)	178 (10)	135 (10)	50 (6)	77 (9)	90 (11)	62 (10)	78 (12)	74 (12)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	—	—	10 (11)	15 (19)	7 (9)
	Mixed/Multiple Races †	130 (9)	245 (15)	167 (14)	173 (8)	254 (13)	204 (14)	120 (10)	180 (17)	97 (16)
	Other Race †	25 (7)	38 (16)	39 (16)	45 (10)	32 (11)	35 (14)	39 (9)	52 (18)	23 (17)

* Out of the number of students [n(%)] who answered this question: 2014 [B67, 75697 (98)], 2016 [B69, 80582 (95)], and 2018 [B64, 68188 (97)].

** Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Table 3d. Number of students who responded “Yes” by year, gender, grade, and race.

During the past 12 months, have you made a plan about how you would kill yourself? n (%)*

Grade	Race	2014		2016		2018	
		Male	Female	Male	Female	Male	Female
6th	White †	340 (3)	369 (4)	359 (3)	434 (4)	367 (4)	465 (5)
	Hispanic/Latino	13 (5)	15 (6)	35 (3)	94 (8)	119 (8)	187 (12)
	Black/African American †	35 (6)	44 (8)	46 (6)	66 (9)	52 (8)	72 (12)
	American Indian/Alaska Native †	14 (8)	14 (11)	11 (6)	14 (8)	7 (7)	17 (19)
	Asian †	26 (3)	44 (5)	23 (6)	27 (6)	23 (7)	36 (12)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	**	6 (14)
	Mixed/Multiple Races †	58 (8)	71 (9)	62 (6)	107 (10)	47 (8)	71 (13)
	Other Race †	8 (4)	17 (9)	24 (10)	21 (9)	19 (8)	17 (9)
8th	White †	498 (5)	1227 (12)	488 (4)	1072 (10)	578 (6)	1142 (13)
	Hispanic/Latino	15 (5)	34 (12)	58 (5)	147 (13)	132 (8)	310 (20)
	Black/African American †	29 (5)	81 (16)	48 (6)	84 (14)	52 (8)	108 (19)
	American Indian/Alaska Native †	8 (6)	30 (28)	13 (9)	20 (18)	14 (16)	23 (30)
	Asian †	46 (5)	131 (15)	28 (6)	46 (11)	26 (8)	52 (15)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	6 (13)	9 (29)
	Mixed/Multiple Races †	70 (9)	175 (23)	62 (7)	188 (19)	64 (12)	112 (21)
	Other Race †	16 (12)	22 (23)	12 (7)	19 (15)	24 (15)	25 (20)
11th	White †	724 (7)	1222 (12)	761 (7)	1215 (12)	761 (9)	1203 (15)
	Hispanic/Latino	22 (8)	28 (10)	73 (8)	120 (13)	135 (11)	198 (16)
	Black/African American †	31 (6)	56 (15)	50 (8)	59 (12)	35 (8)	58 (14)
	American Indian/Alaska Native †	13 (15)	21 (28)	6 (7)	20 (27)	7 (13)	11 (23)
	Asian †	46 (7)	87 (13)	36 (9)	54 (13)	33 (11)	41 (13)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	**	**
	Mixed/Multiple Races †	67 (11)	100 (18)	71 (10)	130 (18)	43 (14)	53 (18)
	Other Race †	19 (13)	20 (24)	22 (14)	11 (13)	12 (14)	11 (23)

* Out of the number of students [n(%)] who answered this question: 2014 [B67, 75697 (98)], 2016 [B69, 80582 (95)], and 2018 [B64, 68188 (97)].

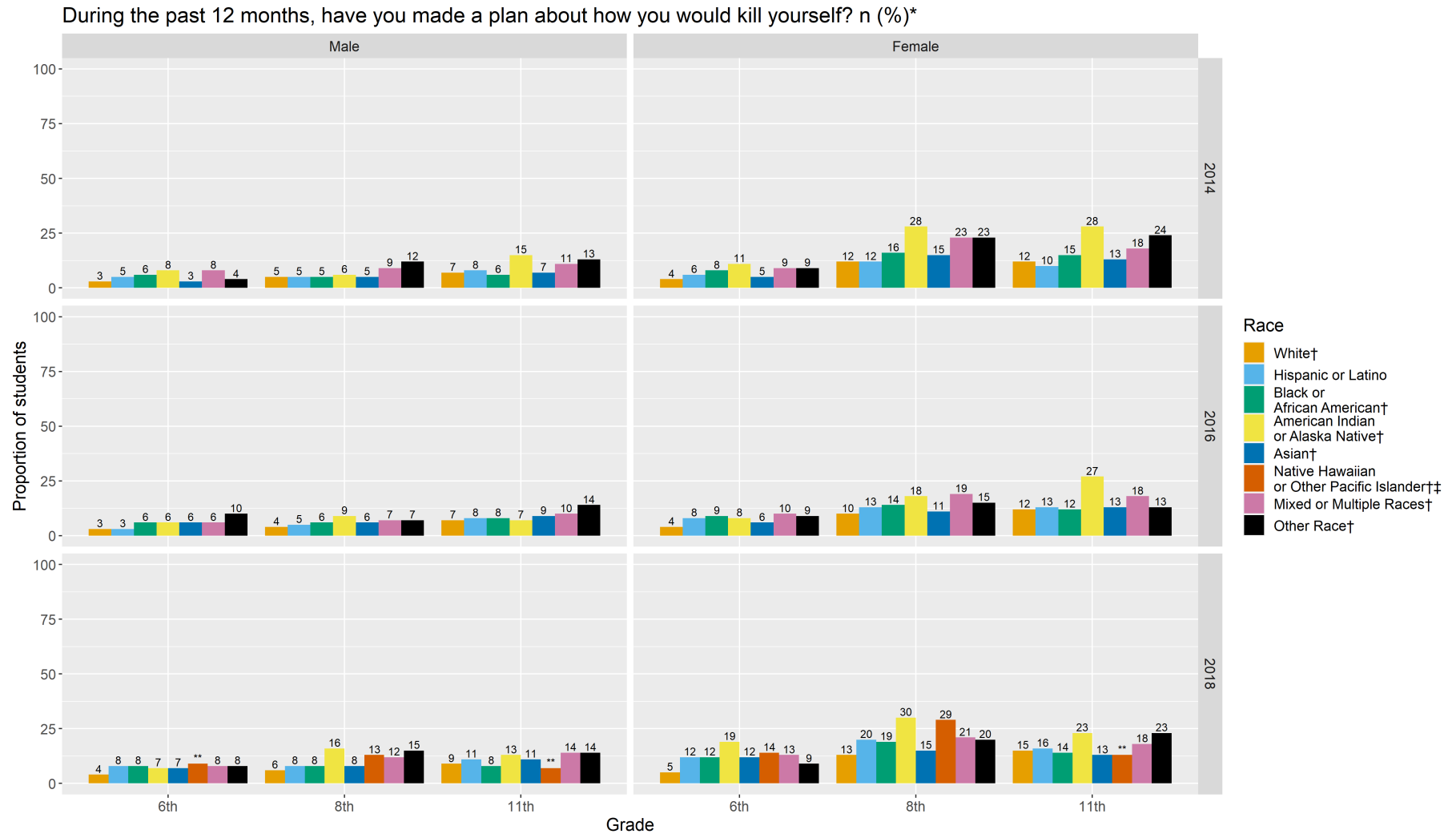
** Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonresponse in the demographic data.

Figure 3. Proportion of students who responded “Yes” by year, gender, grade, and race.



* Out of the number of students [n(%)] who answered this question: 2014 [B67, 75697, (98)], 2016 [B69, 80582 (95)], and 2018 [B64, 68188 (97)].

** Counts < 6 suppressed to protect student confidentiality.

†Non-Hispanic

‡The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Measure 4: During the past 12 months, have you tried to kill yourself?

Table 4a. Number of students who responded “Yes” by year

During the past 12 months, have you tried to kill yourself? n (%)^{*}

		2014	2016	2018
Overall		2768 (4)	3166 (4)	3324 (5)
Gender	Male	867 (2)	1049 (2)	1166 (3)
	Female	1879 (5)	2080 (5)	2109 (6)
Grade	6th	564 (2)	737 (3)	836 (3)
	8th	1180 (4)	1161 (4)	1359 (6)
	11th	1006 (4)	1255 (5)	1114 (5)
Race	White †	1891 (3)	2051 (3)	2019 (4)
	Hispanic/Latino	65 (4)	305 (5)	644 (7)
	Black/African American †	182 (6)	215 (5)	222 (7)
	American Indian/Alaska Native †	57 (8)	63 (8)	40 (9)
	Asian †	220 (4)	93 (4)	87 (5)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	24 (10)
	Mixed/Multiple Races †	281 (7)	346 (6)	208 (7)
	Other Race †	59 (7)	75 (7)	64 (7)

^{*} Out of the number of students [n(%)] who answered this question: 2014 [B68, 75087 (97)], 2016 [B70, 79655 (94)], and 2018 [B65, 68288 (97)].

^{**} Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Table 4b. Number of students who responded “Yes” by year, gender, and (grade or race).

During the past 12 months, have you tried to kill yourself? n (%)*

		2014		2016		2018	
		Male	Female	Male	Female	Male	Female
Overall		867 (2)	1879 (5)	1049 (2)	2080 (5)	1166 (3)	2109 (6)
Grade	6th	239 (2)	319 (3)	310 (2)	418 (3)	342 (3)	475 (4)
	8th	293 (2)	879 (7)	313 (2)	833 (6)	407 (3)	930 (8)
	11th	331 (3)	670 (6)	422 (3)	824 (7)	412 (4)	697 (7)
Race	White †	589 (2)	1294 (4)	680 (2)	1350 (4)	698 (3)	1303 (5)
	Hispanic/Latino	24 (3)	39 (5)	88 (3)	215 (7)	215 (5)	419 (10)
	Black/African American †	58 (3)	122 (8)	82 (4)	131 (7)	93 (5)	127 (8)
	American Indian/Alaska Native †	23 (6)	34 (11)	19 (4)	43 (12)	14 (6)	26 (12)
	Asian †	58 (2)	160 (6)	36 (3)	57 (5)	28 (3)	58 (6)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	12 (9)	12 (12)
	Mixed/Multiple Races †	89 (4)	190 (9)	103 (4)	238 (9)	77 (5)	124 (9)
	Other Race †	23 (5)	35 (10)	35 (6)	38 (9)	26 (5)	33 (9)

* Out of the number of students [n(%)] who answered this question: 2014 [B68, 75087 (97)], 2016 [B70, 79655 (94)], and 2018 [B65, 68288 (97)].

** Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Table 4c. Number of students who responded “Yes” by year, grade, and (gender or race).

During the past 12 months, have you tried to kill yourself? n (%)^{*}

		2014			2016			2018		
		6th	8th	11th	6th	8th	11th	6th	8th	11th
Overall		564 (2)	1180 (4)	1006 (4)	737 (3)	1161 (4)	1255 (5)	836 (3)	1359 (6)	1114 (5)
Gender	Male	239 (2)	331 (3)	879 (7)	310 (2)	422 (3)	833 (6)	342 (3)	412 (4)	930 (8)
	Female	293 (2)	319 (3)	670 (6)	313 (2)	418 (3)	824 (7)	407 (3)	475 (4)	697 (7)
Race	White †	332 (2)	789 (4)	759 (4)	405 (2)	747 (3)	895 (4)	418 (2)	788 (4)	805 (5)
	Hispanic/Latino	19 (3)	23 (4)	22 (4)	80 (3)	114 (5)	109 (6)	195 (6)	280 (9)	167 (7)
	Black/African American †	60 (5)	78 (7)	43 (5)	74 (5)	82 (6)	58 (5)	79 (6)	94 (8)	48 (6)
	American Indian/Alaska Native †	19 (6)	21 (9)	17 (10)	22 (6)	25 (10)	16 (10)	13 (7)	19 (11)	8 (8)
	Asian †	44 (3)	112 (6)	64 (5)	22 (3)	37 (4)	34 (4)	29 (5)	37 (6)	21 (3)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	—	—	9 (10)	10 (13)	**
	Mixed/Multiple Races †	71 (5)	130 (8)	78 (7)	93 (4)	134 (7)	119 (8)	70 (6)	95 (9)	42 (7)
	Other Race †	13 (4)	23 (10)	22 (9)	31 (7)	21 (7)	22 (9)	18 (4)	33 (12)	13 (9)

^{*} Out of the number of students [n(%)] who answered this question: 2014 [B68, 75087 (97)], 2016 [B70, 79655 (94)], and 2018 [B65, 68288 (97)].

^{**} Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonresponse in the demographic data.

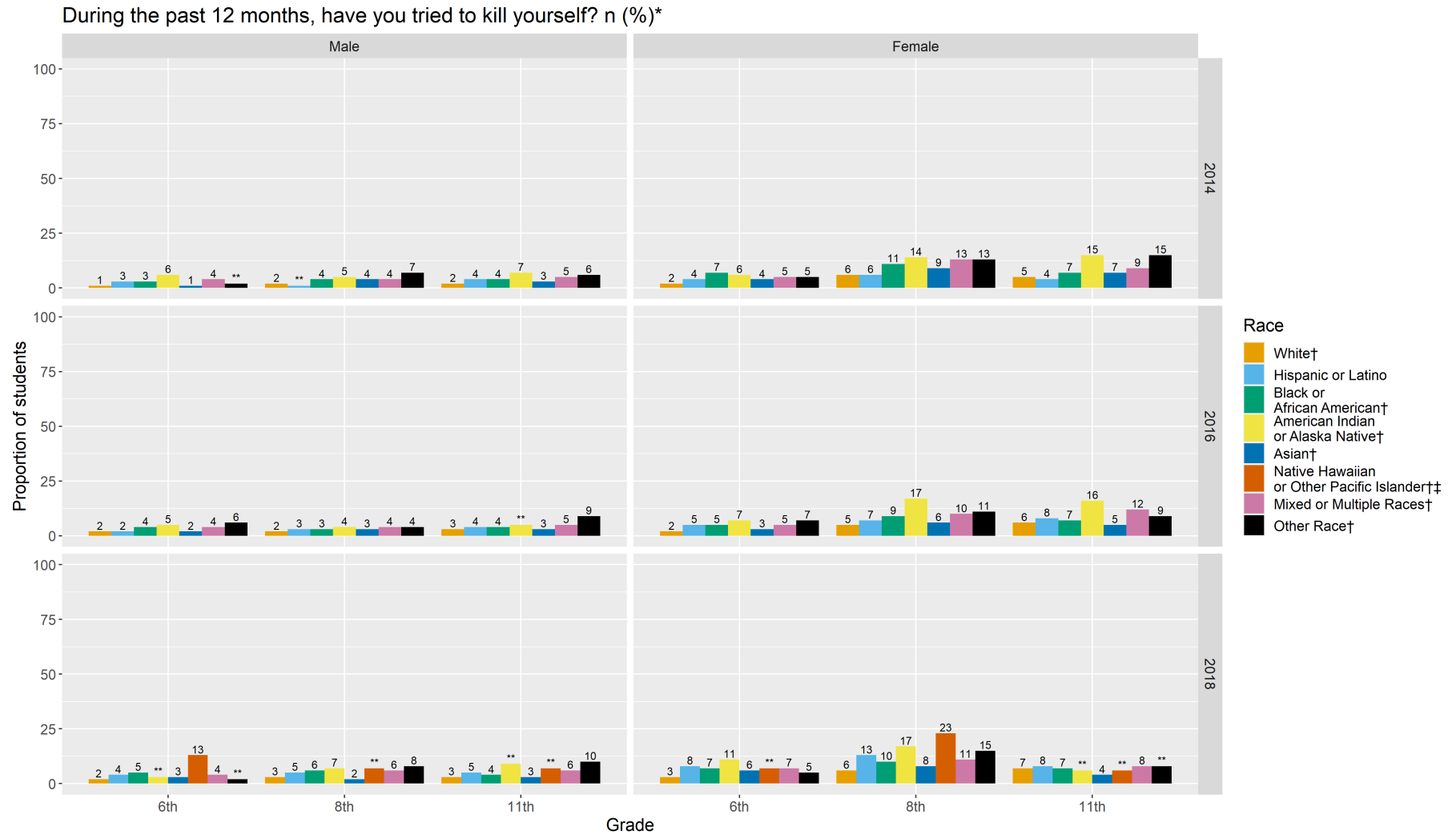
Table 4d. Number of students who responded “Yes” by year, gender, grade, and race.During the past 12 months, have you tried to kill yourself? n (%)^{*}

Grade	Race	2014		2016		2018	
		Male	Female	Male	Female	Male	Female
6th	White †	152 (1)	179 (2)	186 (2)	214 (2)	183 (2)	230 (3)
	Hispanic/Latino	9 (3)	10 (4)	19 (2)	61 (5)	68 (4)	122 (8)
	Black/African American †	19 (3)	39 (7)	31 (4)	41 (5)	36 (5)	42 (7)
	American Indian/Alaska Native †	11 (6)	8 (6)	9 (5)	12 (7)	**	10 (11)
	Asian †	11 (1)	32 (4)	10 (2)	12 (3)	11 (3)	17 (6)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	6 (13)	**
	Mixed/Multiple Races †	30 (4)	40 (5)	39 (4)	53 (5)	27 (4)	40 (7)
	Other Race †	**	9 (5)	14 (6)	17 (7)	**	10 (5)
8th	White †	189 (2)	595 (6)	193 (2)	542 (5)	226 (3)	551 (6)
	Hispanic/Latino	**	18 (6)	33 (3)	80 (7)	84 (5)	192 (13)
	Black/African American †	22 (4)	56 (11)	28 (3)	54 (9)	36 (6)	57 (10)
	American Indian/Alaska Native †	6 (5)	15 (14)	6 (4)	19 (17)	6 (7)	13 (17)
	Asian †	30 (4)	82 (9)	14 (3)	23 (6)	8 (2)	29 (8)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	**	7 (23)
	Mixed/Multiple Races †	32 (4)	98 (13)	32 (4)	101 (10)	32 (6)	60 (11)
	Other Race †	10 (7)	13 (13)	6 (4)	14 (11)	12 (8)	19 (15)
11th	White †	245 (2)	512 (5)	300 (3)	591 (6)	286 (3)	517 (7)
	Hispanic/Latino	10 (4)	11 (4)	36 (4)	73 (8)	63 (5)	103 (8)
	Black/African American †	17 (4)	26 (7)	23 (4)	35 (7)	20 (4)	28 (7)
	American Indian/Alaska Native †	6 (7)	11 (15)	**	12 (16)	**	**
	Asian †	17 (3)	46 (7)	12 (3)	22 (5)	9 (3)	12 (4)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	**	**
	Mixed/Multiple Races †	27 (5)	50 (9)	32 (5)	84 (12)	17 (6)	24 (8)
	Other Race †	9 (6)	13 (15)	14 (9)	7 (9)	9 (10)	**

^{*} Out of the number of students [n(%)] who answered this question: 2014 [B68, 75087 (97)], 2016 [B70, 79655 (94)], and 2018 [B65, 68288 (97)].^{**} Counts < 6 suppressed to protect student confidentiality.[†] Non-Hispanic[‡] The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Note: Row and column totals may not sum to the overall counts due to nonresponse in the demographic data.

Figure 4. Proportion of students who responded “Yes” by year, gender, grade, and race.



* Out of the number of students [n(%)] who answered this question: 2014 [B68, 75087, (97)], 2016 [B70, 79655 (94)], and 2018 [B65, 68288 (97)].

** Counts < 6 suppressed to protect student confidentiality.

†Non-Hispanic

‡The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

Measure 5: If you attempted to kill yourself during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?

Table 5a. Number of students who responded “Yes” by year

OUT OF THOSE STUDENTS WHO ANSWERED “YES” TO THE PREVIOUS QUESTION (During the past 12 months, have you tried to kill yourself?)[§]

If you attempted to kill yourself during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse? n (%)^{*}

		2014	2016	2018
Overall		774 (28)	766 (24)	865 (26)
Gender	Male	230 (27)	252 (24)	295 (25)
	Female	542 (29)	501 (24)	557 (26)
Grade	6th	139 (25)	136 (18)	184 (22)
	8th	308 (26)	267 (23)	335 (25)
	11th	321 (32)	360 (29)	339 (30)
Race	White †	487 (26)	491 (24)	457 (23)
	Hispanic/Latino	16 (25)	72 (24)	214 (33)
	Black/African American †	62 (34)	48 (22)	64 (29)
	American Indian/Alaska Native †	19 (33)	15 (24)	18 (45)
	Asian †	64 (29)	23 (25)	19 (22)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	9 (38)
	Mixed/Multiple Races †	93 (33)	85 (25)	57 (27)
	Other Race †	28 (47)	30 (40)	21 (33)

^{*} Out of the number of students [n(%)] who answered this question: 2014 [B69, 2743 (99)], 2016 [B71, 3126 (99)], and 2018 [B66, 3306 (99)].

^{**} Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

§ This question is a skip question. Only those students who answered "Yes" to the previous question are were asked this question.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Table 5b. Number of students who responded “Yes” by year, gender, and (grade or race).

OUT OF THOSE STUDENTS WHO ANSWERED “YES” TO THE PREVIOUS QUESTION (During the past 12 months, have you tried to kill yourself?)[§]

If you attempted to kill yourself during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse? n (%)^{*}

		2014		2016		2018	
		Male	Female	Male	Female	Male	Female
Overall		230 (27)	542 (29)	252 (24)	501 (24)	295 (25)	557 (26)
Grade	6th	59 (25)	80 (25)	63 (20)	69 (17)	80 (23)	99 (21)
	8th	70 (24)	238 (27)	74 (24)	188 (23)	90 (22)	241 (26)
	11th	100 (30)	221 (33)	114 (27)	243 (29)	125 (30)	213 (31)
Race	White †	132 (22)	355 (27)	150 (22)	335 (25)	133 (19)	322 (25)
	Hispanic/Latino	9 (38)	7 (18)	23 (26)	49 (23)	81 (38)	129 (31)
	Black/African American †	21 (36)	41 (34)	23 (28)	24 (18)	28 (30)	35 (28)
	American Indian/Alaska Native †	8 (35)	11 (32)	**	9 (21)	8 (57)	10 (38)
	Asian †	19 (33)	45 (28)	10 (28)	13 (23)	**	14 (24)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	**	**
	Mixed/Multiple Races †	28 (31)	65 (34)	24 (23)	59 (25)	22 (29)	34 (27)
	Other Race †	12 (52)	16 (46)	16 (46)	12 (32)	12 (46)	8 (24)

^{*} Out of the number of students [n(%)] who answered this question: 2014 [B69, 2743 (99)], 2016 [B71, 3126 (99)], and 2018 [B66, 3306 (99)].

^{**} Counts < 6 suppressed to protect student confidentiality.

[†] Non-Hispanic

[‡] The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

[§] This question is a skip question. Only those students who answered "Yes" to the previous question are were asked this question.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Table 5c. Number of students who responded “Yes” by year, grade, and (gender or race).

OUT OF THOSE STUDENTS WHO ANSWERED “YES” TO THE PREVIOUS QUESTION (During the past 12 months, have you tried to kill yourself?)[§]

If you attempted to kill yourself during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse? n (%)^{*}

		2014			2016			2018		
		6th	8th	11th	6th	8th	11th	6th	8th	11th
Overall		139 (25)	308 (26)	321 (32)	136 (18)	267 (23)	360 (29)	184 (22)	335 (25)	339 (30)
Gender	Male	59 (25)	100 (30)	238 (27)	63 (20)	114 (27)	188 (23)	80 (23)	125 (30)	241 (26)
	Female	70 (24)	80 (25)	221 (33)	74 (24)	69 (17)	243 (29)	90 (22)	99 (21)	213 (31)
Race	White †	79 (24)	192 (24)	213 (28)	69 (17)	173 (23)	248 (28)	66 (16)	168 (21)	221 (27)
	Hispanic/Latino	**	**	9 (41)	12 (15)	25 (22)	35 (32)	62 (32)	89 (32)	61 (37)
	Black/African American †	13 (22)	29 (37)	19 (44)	10 (14)	18 (22)	20 (34)	21 (27)	19 (20)	24 (50)
	American Indian/Alaska Native †	**	6 (29)	10 (59)	**	7 (28)	**	**	9 (47)	**
	Asian †	13 (30)	27 (24)	24 (38)	6 (27)	8 (22)	9 (26)	**	10 (27)	**
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	—	—	**	**	**
	Mixed/Multiple Races †	23 (32)	39 (30)	31 (40)	21 (23)	30 (22)	34 (29)	15 (21)	26 (27)	16 (38)
	Other Race †	**	10 (43)	15 (68)	13 (42)	6 (29)	10 (45)	**	11 (33)	6 (46)

^{*} Out of the number of students [n(%)] who answered this question: 2014 [B69, 2743 (99)], 2016 [B71, 3126 (99)], and 2018 [B66, 3306 (99)].

^{**} Counts < 6 suppressed to protect student confidentiality.

[†] Non-Hispanic

[‡] The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

[§] This question is a skip question. Only those students who answered "Yes" to the previous question are were asked this question.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Table 5d. Number of students who responded “Yes” by year, gender, grade, and race.

OUT OF THOSE STUDENTS WHO ANSWERED “YES” TO THE PREVIOUS QUESTION (During the past 12 months, have you tried to kill yourself?)[§]

If you attempted to kill yourself during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse? n (%)^{*}

Grade	Race	2014		2016		2018	
		Male	Female	Male	Female	Male	Female
6th	White †	37 (24)	42 (23)	34 (18)	34 (16)	25 (14)	41 (18)
	Hispanic/Latino	**	**	**	8 (13)	28 (41)	31 (25)
	Black/African American †	**	10 (26)	**	**	13 (36)	7 (17)
	American Indian/Alaska Native †	**	**	**	**	0 (0)	**
	Asian †	**	9 (28)	**	**	**	**
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	**	**
	Mixed/Multiple Races †	9 (30)	14 (35)	8 (21)	12 (23)	7 (26)	8 (20)
	Other Race †	**	**	6 (43)	7 (41)	**	**
8th	White †	36 (19)	156 (26)	44 (23)	126 (23)	38 (17)	128 (23)
	Hispanic/Latino	**	0 (0)	7 (21)	18 (22)	27 (32)	62 (32)
	Black/African American †	10 (45)	19 (34)	8 (29)	10 (19)	**	14 (25)
	American Indian/Alaska Native †	**	**	**	**	**	**
	Asian †	8 (27)	19 (23)	**	**	**	8 (28)
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	**	**
	Mixed/Multiple Races †	8 (25)	31 (32)	7 (22)	22 (22)	8 (25)	17 (28)
	Other Race †	**	6 (46)	**	**	**	6 (32)
11th	White †	58 (24)	155 (30)	72 (24)	174 (29)	70 (24)	151 (29)
	Hispanic/Latino	**	**	12 (33)	23 (32)	26 (41)	34 (33)
	Black/African American †	8 (47)	11 (42)	10 (43)	10 (29)	10 (50)	14 (50)
	American Indian/Alaska Native †	**	**	**	**	**	**
	Asian †	7 (41)	17 (37)	**	**	**	**
	Native Hawaiian/Other Pacific Islander † ‡	—	—	—	—	**	**
	Mixed/Multiple Races †	11 (41)	20 (40)	9 (28)	25 (30)	7 (41)	9 (38)
	Other Race †	7 (78)	8 (62)	6 (43)	**	6 (67)	0 (0)

* Out of the number of students [n(%)] who answered this question: 2014 [B69, 2743 (99)], 2016 [B71, 3126 (99)], and 2018 [B66, 3306 (99)].

** Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

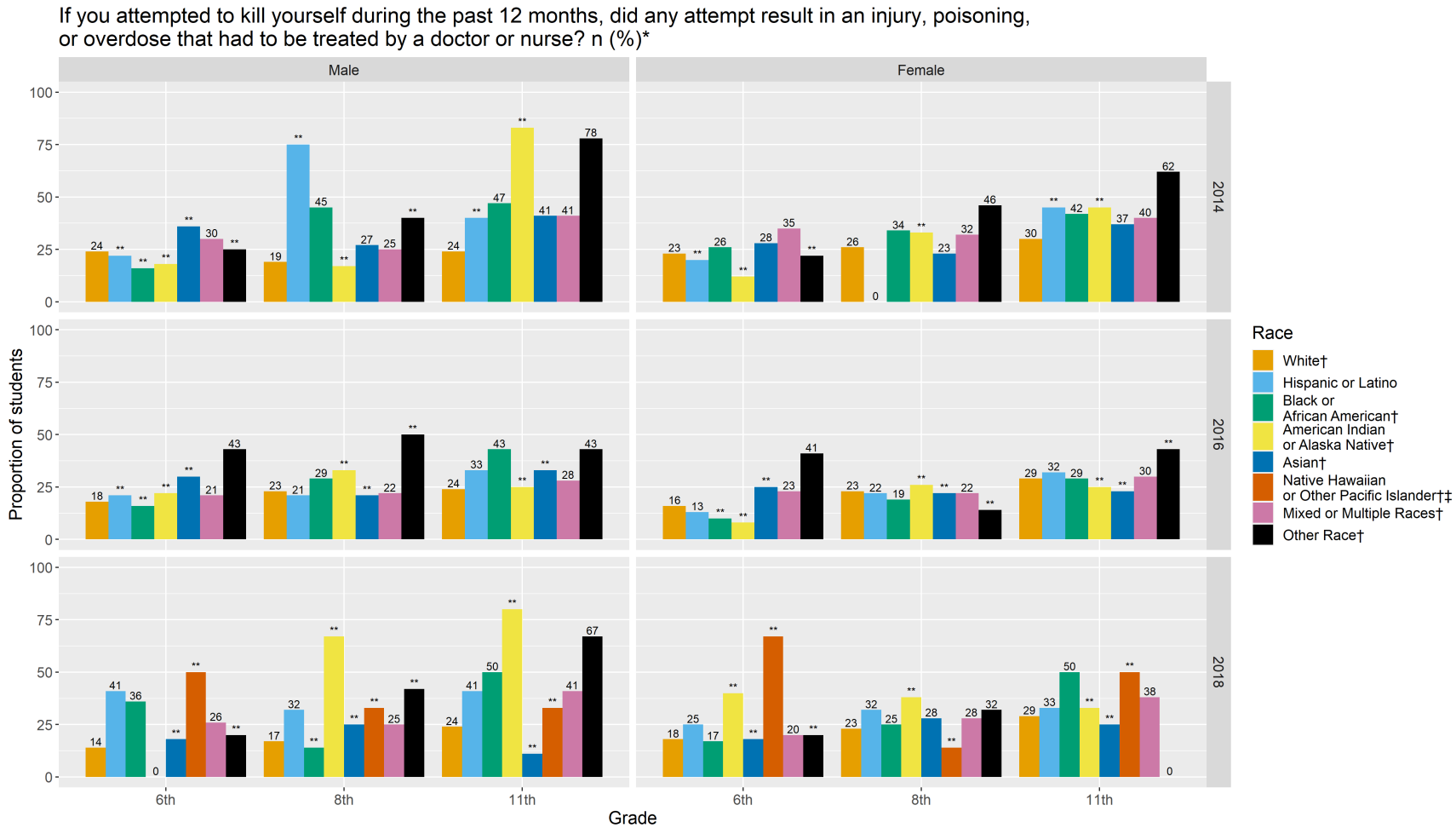
‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

§ This question is a skip question. Only those students who answered "Yes" to the previous question are were asked this question.

Note: Row and column totals may not sum to the overall counts due to nonreponse in the demographic data.

Figure 5. Proportion of students who responded “Yes” by year, gender, grade, and race.

OUT OF THOSE STUDENTS WHO ANSWERED “YES” TO THE PREVIOUS QUESTION (During the past 12 months, have you tried to kill yourself?)[§]



^{*} Out of the number of students [n(%)] who answered this question: 2014 [B69, 2743, (99)], 2016 [B71, 3126 (99)], and 2018 [B66, 3306 (99)].
^{**} Counts < 6 suppressed to protect student confidentiality.
[†]Non-Hispanic
[‡]The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.
[§]This question is a skip question. Only those students who answered “Yes” to the previous question are asked this question.

Regression Analysis Results

Figure 6. Race and gender main effects odds ratios and 95% confidence intervals for students who responded “Yes”

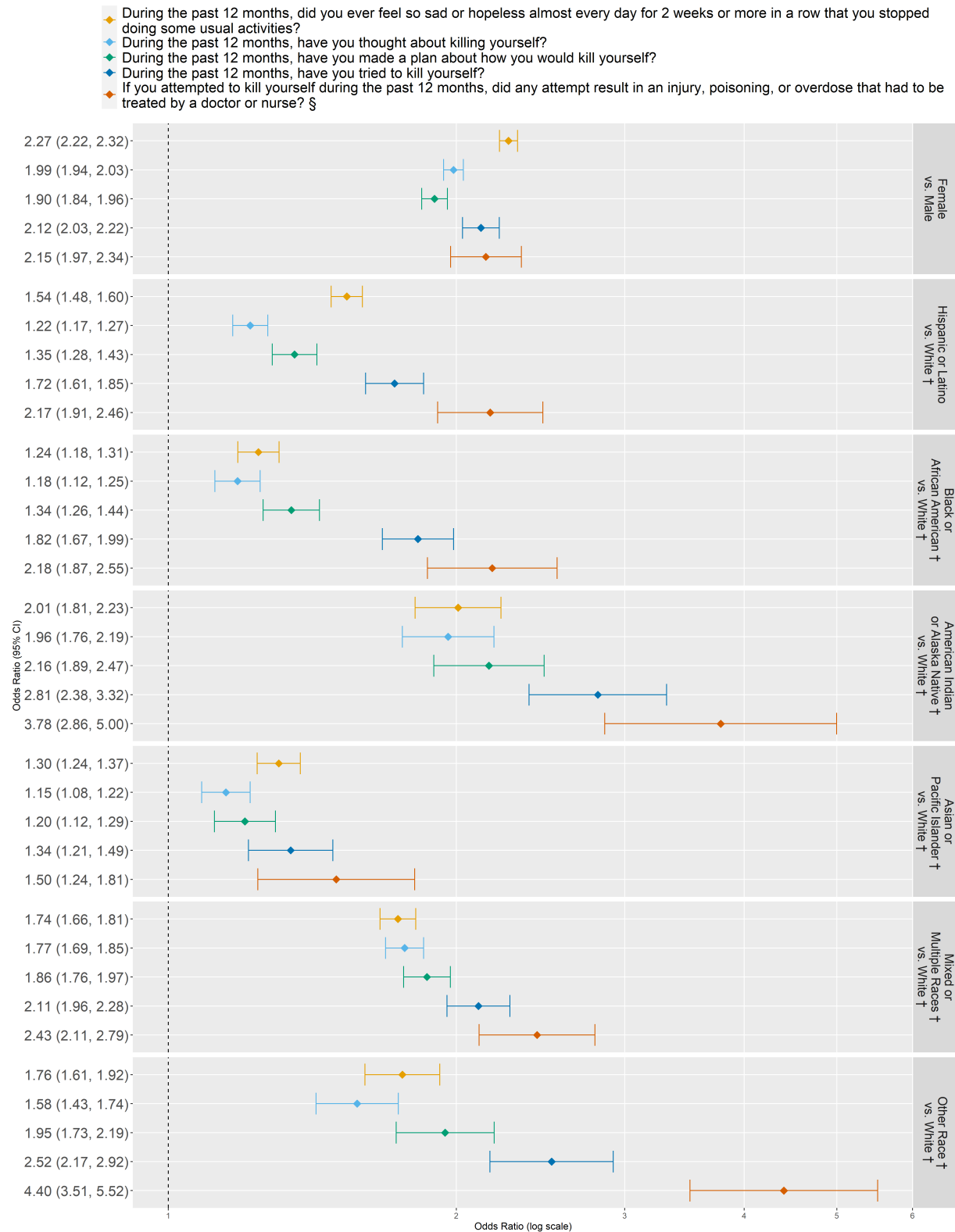


Figure 7. Race and gender interaction effects odds ratios and 95% confidence intervals for Hispanic or Latino vs. White students who responded “Yes”

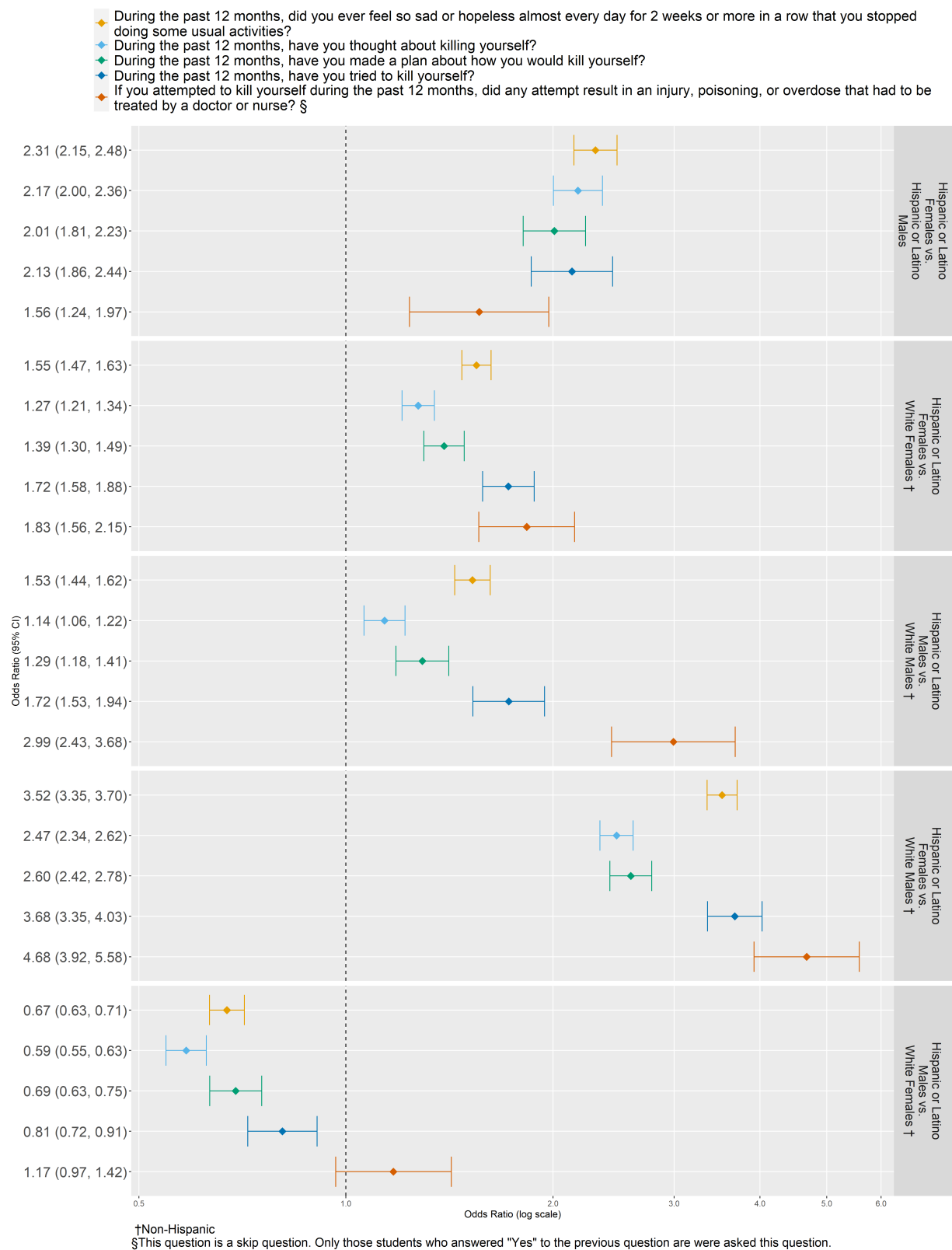


Figure 8. Race and gender interaction effects odds ratios and 95% confidence intervals for Black or African American vs. White students who responded “Yes”

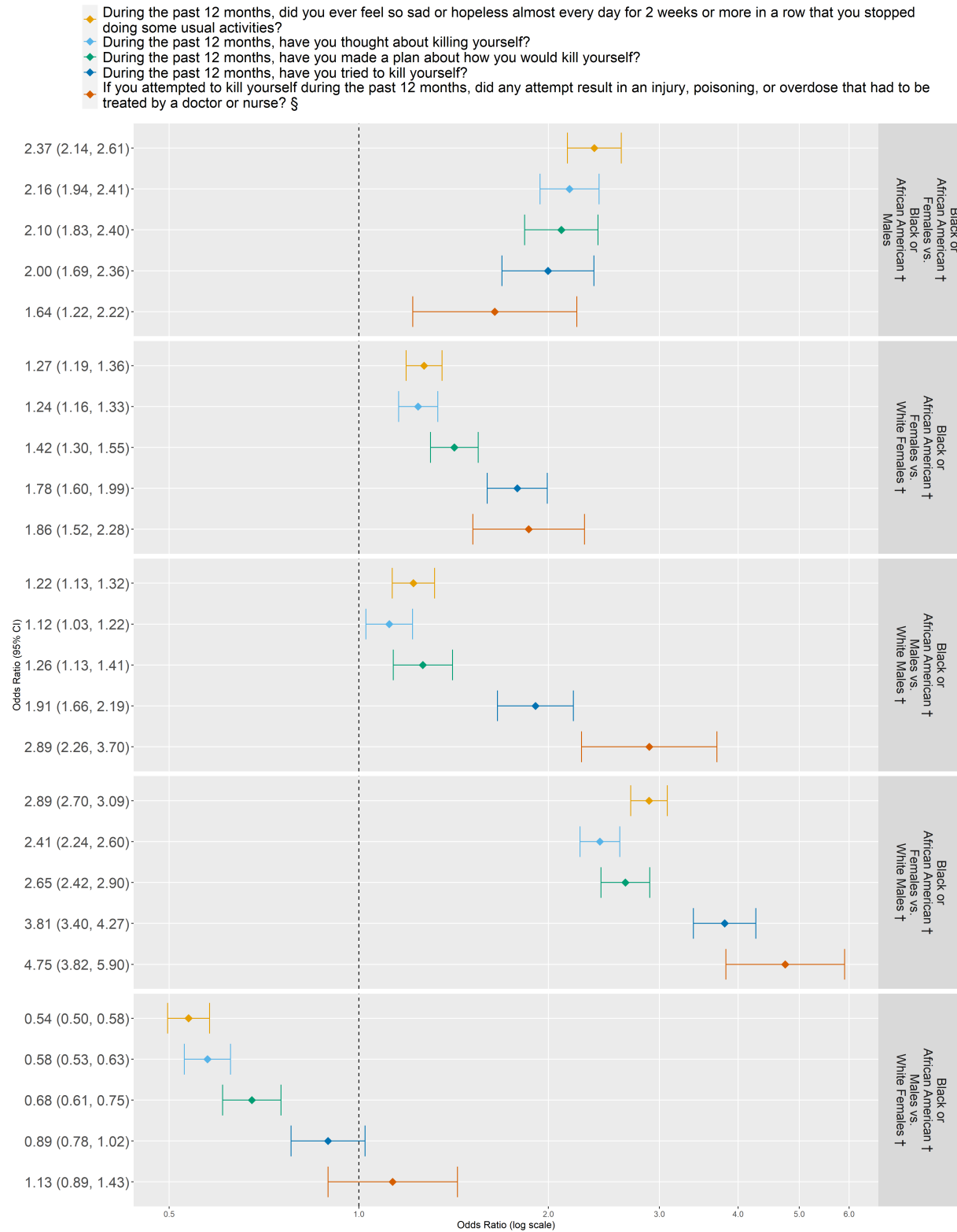


Figure 9. Race and gender interaction effects odds ratios and 95% confidence intervals for American Indian or Alaska Native vs. White students who responded “Yes”

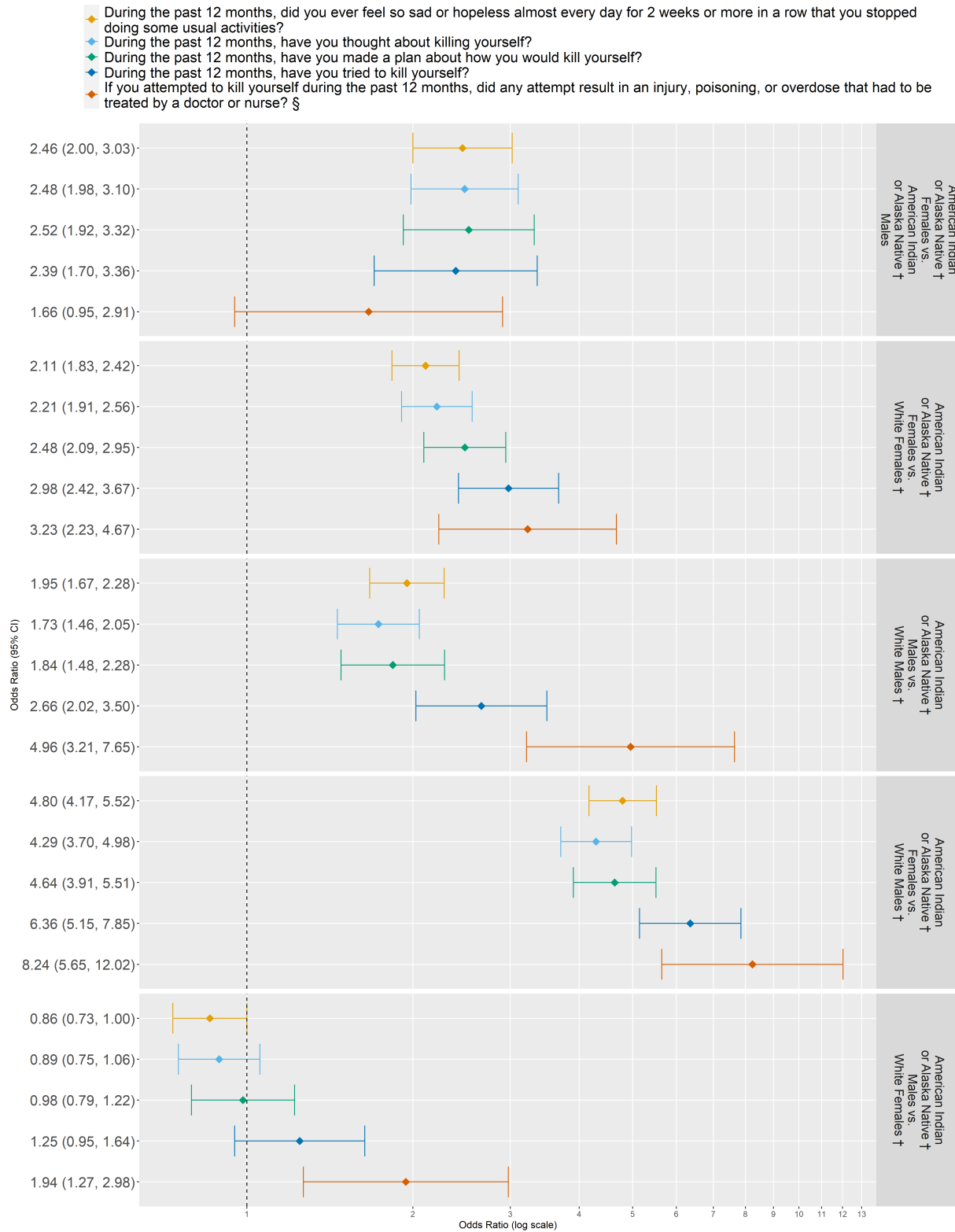


Figure 10. Race and gender interaction effects odds ratios and 95% confidence intervals for Asian or Pacific Islander vs. White students who responded “Yes”

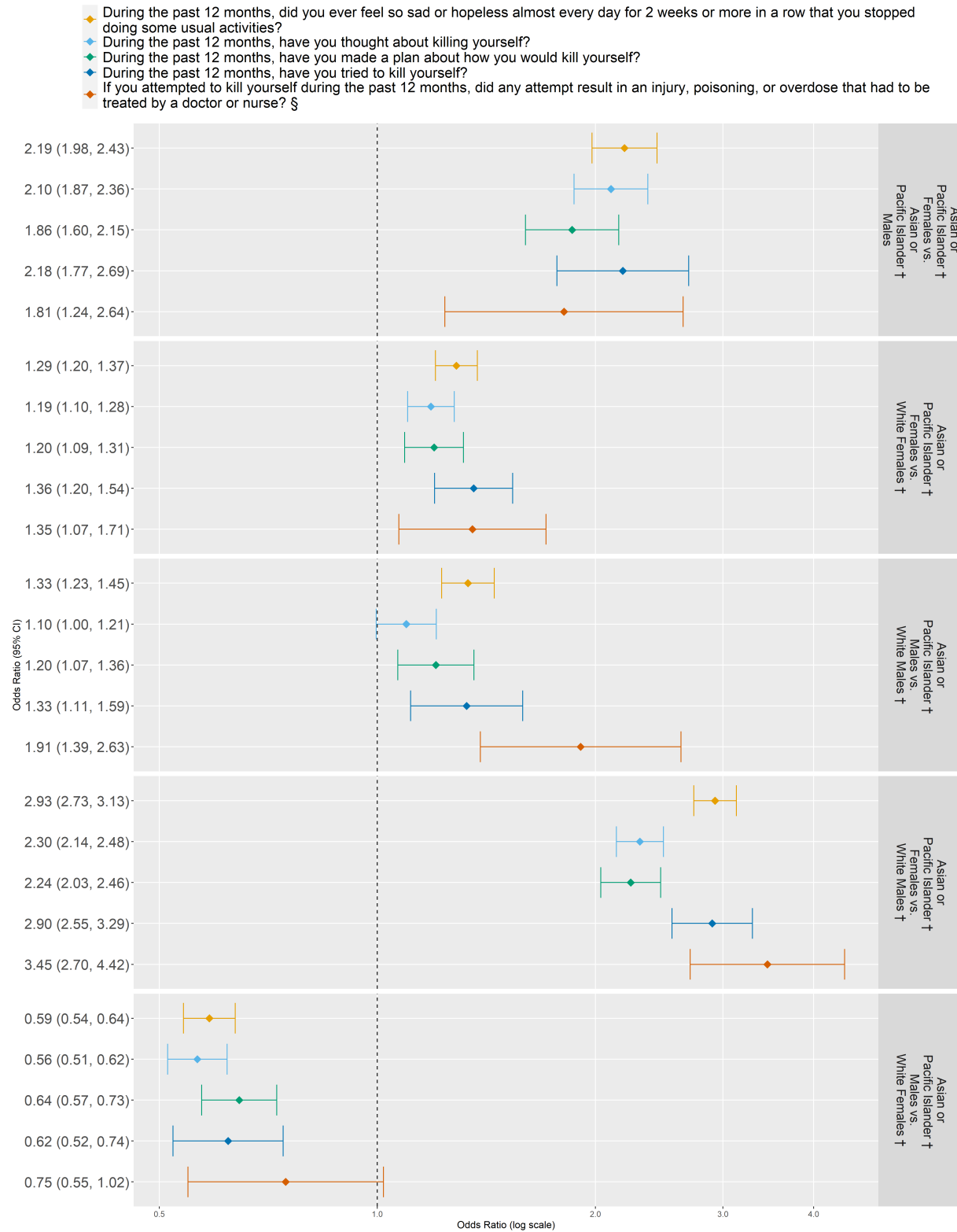


Figure 11. Race and gender interaction effects odds ratios and 95% confidence intervals for Mixed or Multiple Races vs. White students who responded “Yes”

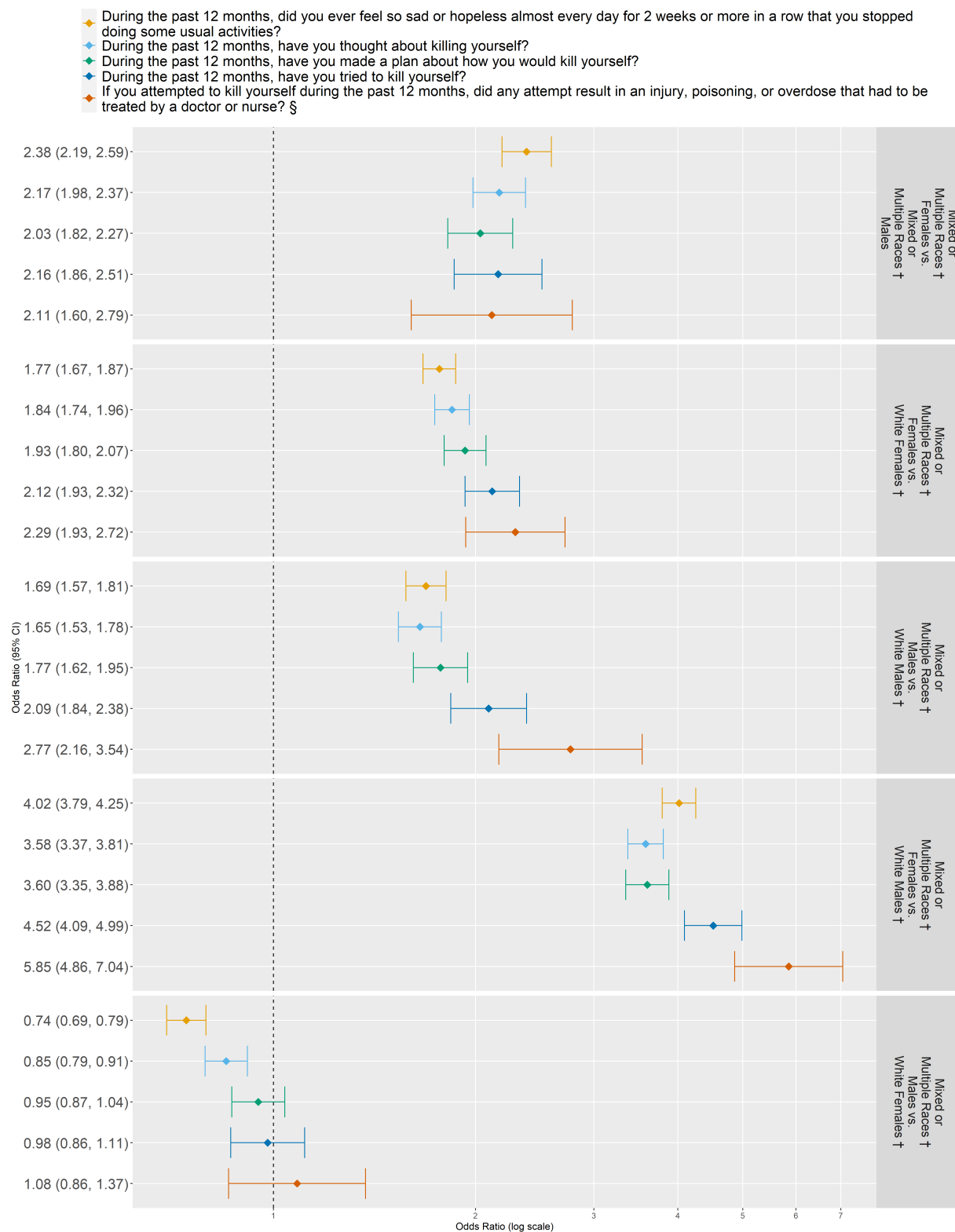
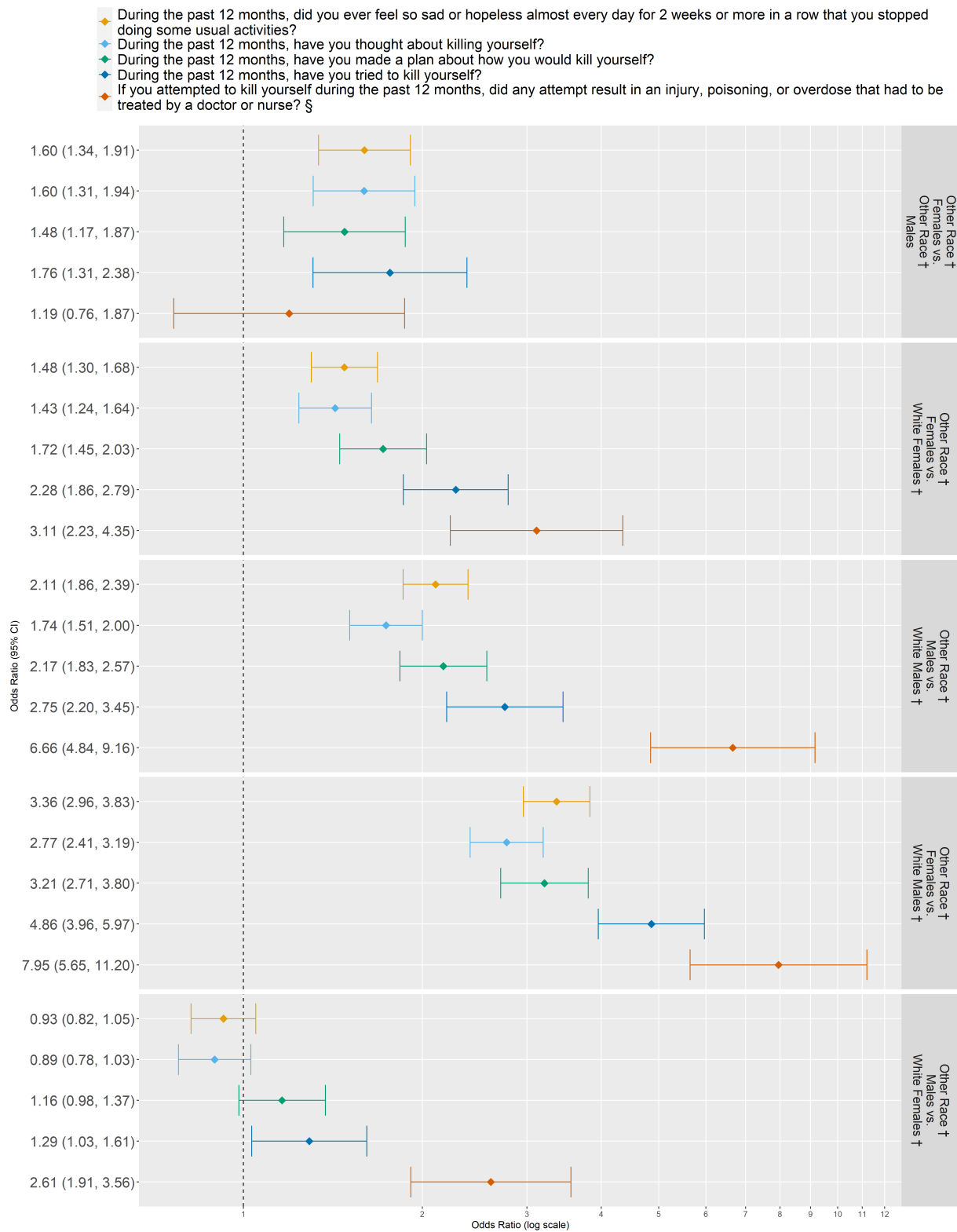


Figure 12. Race and gender interaction effects odds ratios and 95% confidence intervals for Other Race vs. White students who responded “Yes”



Prevalence Statistics Discussion

The focus of this section was to provide descriptive results in prevalence counts and proportions by gender, race/ethnicity, grade, and year to answer the key questions:

1. What statewide health disparities exist by gender?
2. What statewide health disparities exist by race/ethnicity?
3. For significant existing health disparities, what is the trend from 2014-2018?

As this was meant to be a descriptive analysis, there is no statistical comparison of prevalence rates given the large sample size and potential for spurious statistically significant findings. Not all results are discussed; overall statements are provided as well as some case points and example inference statements. The regression analysis discussion in the next section provides more information about statistical differences between groups.

Case Points of Discussion and Inference

Measure 1: During the past 12 months, did you ever feel so sad or hopeless almost every day for 2 weeks or more in a row that you stopped doing some usual activities?

- Prevalence rates for females were higher than for males overall. In 2018, 32% of females reported feeling sad or hopeless for 2 weeks or more in the past 12 months compared to 17% of males (Table 1a).
- Prevalence rates increased for both males and females overall from 2014 (17%) to 2018 (24%) (Table 1a).
- Prevalence rates were higher for 11th graders for both males and females than for either 6th or 8th graders (Table 1b).
- Prevalence rates were generally higher for non-White racial/ethnic groups compared to White students, in particular for Black, Hispanic, American Indian/Alaska Native, Asian, and Mixed or Multiple race students (Table 1a).
- In 2018, non-White females in 11th grade had the highest overall rates of feeling sad or hopelessness in the past 12 months, in particular Hispanic females (49%), American Indian/Alaska Native females (62%), and Mixed or Multiple race females (48%) (Table 1d, Figure 1).

Measure 2: During the past 12 months, have you thought about killing yourself?

- Prevalence rates for females were higher than for males overall. In 2018, 26% of females reported having thoughts of killing themselves over the past 12 months compared to 15% of males (Table 2a).
- Prevalence rates increased for both males and females overall from 2014 (13%) to 2018 (21%) (Table 2a).
- Prevalence rates for both males and females were higher for 11th graders than for either 8th or 6th graders. Females in 11th grade in 2018 had the highest prevalence rate at 32% (Table 2b).
- Prevalence rates were generally higher for non-White racial/ethnic groups compared to White students, in particular for American Indian/Native American, Mixed or Multiple Races, and Other Race students (Table 2a).
- In 2018, while considering grade, gender, and race (Table 2d, Figure 2), non-White females in 8th and 11th grade had the highest overall rates of having thoughts of killing themselves in the past 12 months, with the highest rates in Native American Indian/Alaska females in 11th grade (44%) and Hispanic (36%), Black (34%), Native American Indian/Alaska Native (49%), Native Hawaiian/Other Pacific Islander (35%), and Mixed or Multiple Race (39%) females in 8th grade.

Measure 3: During the past 12 months, have you made a plan about how you would kill yourself?

- Prevalence rates for females were higher than for males overall. In 2018, 12% of females reported having made a plan of how to kill themselves over the past 12 months compared to 7% of males (Table 3a).
- Prevalence rates increased for both males and females from 2014 (8%) to 2018 (10%) (Table 3a).
- Prevalence rates increased with age and from 2014 to 2018 for both females and males (Table 3b).
- Prevalence rates were generally higher for non-White racial/ethnic groups compared to White students, in particular American Indian/Alaska Native and Mixed or Multiple Races (Table 3a).
- Among 8th graders, 10% of White students reported having made a plan to kill themselves over the past 12 months compared to 14% of Hispanic or Latino, 13% of Black or African American, 22% of American Indian

or Alaska Native, 12% of Asian or Other Pacific Islander, and 17% of Mixed or Multiple Race students (Table 3d).

- Across 2014, 2016, and 2018, American Indian or Alaska Native females had the highest rates of making a plan to kill themselves in the past 12 months in all grades (6th, 8th, and 11th); Asian females had among the lowest rates (Table 3d, Figure 3).

Measure 4: During the past 12 months, have you tried to kill yourself?

The prevalence rates for this indicator are very low in this sample of students. It is important to note however that:

- Prevalence rates for females were higher than for males for each year (Table 4a) and that rates were highest in 2018 among 8th grade females (8%) compared to females in either 6th or 11th grade or to males in any grade (Table 4b).
- Prevalence rates stayed approximately the same for both males and females from 2014 to 2018 (Table 4a).
- Prevalence rates were generally higher for non-White racial/ethnic groups compared to White students (Table 4a). In 2018, prevalence rates for 8th grade females reached double digits in all racial/ethnic groups except White and Asian. White 8th grade females had a rate of 6% compared to 13% in Hispanic or Latino, 10% in Black or African American, 17% in American Indian or Alaska Native, and 11% in Mixed or Multiple race females (Table 4d, Figure 4).

Measure 5: If you attempted to kill yourself during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?

The prevalence rates for suicide attempt is low as seen in Tables 4a-d and Figure 4, however we can see in Tables 5a-d and Figure 5 that rates of injury, poisoning, or overdose that was treated by doctor/nurse (severity of attempt) was quite high.

- Prevalence rates were similar between genders (Table 5a).
- Overall higher prevalence rates were observed in 11th grade compared to 8th or 6th grade. In 2018, 30% of suicide attempts among 11th grade students resulted in injury that had to be treated by a doctor or nurse compared to 22% of 6th grade students (Table 5a).
- In 2018, White (27%) and Asian (19%) 11th grade students reported lower rates compared to Black or African American (50%), Hispanic or Latino (37%), American Indian or Alaska Native (62%), and Mixed or Multiple race (38%) students (Table 5c).

Regression Analysis Discussion

The focus of this section was to identify statewide health disparities by gender and race and provide results for further education, discussion, and analysis. Not all results are discussed; overall statements are provided as well as some case points and example inference statements.

Main Effect Models

The logistic regression results for the main effects of gender and race while controlling for grade and year are shown in Figure 6. The odds ratio estimates and 95% intervals for a student responding “Yes” are shown for each question, or measure, by gender and race using White and Male as the reference groups. An odds ratio with a value greater than one represents the odds of responding “Yes” in that group is higher than the odds in the reference group. Any estimate with a confidence interval not including one is considered a statistically significant results.

There is a significant increase in the odds of students reporting the mental health measures for females compared to males and non-White students compared to White students. The discrepancies are particularly large in American Indian or Alaska Native and students who identified as Other Race compared to White students. The discrepancies also tend to increase with the severity of the mental health measure (i.e. feeling sad or hopeless escalating to attempting to kill themselves and an attempt resulting in injury).

Case Points of Discussion and Inference

- The odds of a female student reporting having attempting to kill themselves were about twice that of males [OR = 2.12 (2.03, 2.22), Figure 6], while controlling for race, grade, and year.
- The odds a Hispanic or Latino student reported having thought about killing themselves increased 22% over White students [OR = 1.22 (1.17, 1.27), Figure 6] while the odds a Hispanic or Latino student reported having tried to kill themselves increased 72% over White students [OR = 1.72 (1.61, 1.85)], while controlling for gender, grade, and year.
- Of those students who tried to kill themselves (while controlling for gender, grade, and year), the odds of a Hispanic or Latino student whose attempt resulted in an injury, poisoning, or overdose increased 117% over the odds of a White student (Figure 6).

Interaction Effect Models

The logistic regression results for the interaction effects of gender and race while controlling for grade and year are shown in Figures 7 - 12. The odds ratio estimates and 95% intervals for a student responding “Yes” are shown for each question, or measure, by gender and race interaction using White and Male as the reference groups. An odds ratio with a value greater than one represents the odds of responding “Yes” in that group is higher than the odds in the reference group. Any estimate with a confidence interval not including one is considered a statistically significant results.

Within each race, the odds of female students reporting each of the mental health measures were generally significantly greater than the odds of male students, while controlling for grade and year. Within each gender, the odds of non-White students reporting each of the mental health measures were generally significantly greater than the odds of White students, while controlling for grade and year. Within most races, there is a large increase in the odds ratio of non-White male students whose attempt resulted in injury, poisoning, or overdose compared to White males over the other mental health measures that is not seen in the odds ratios of non-White female students compared to White female students.

Case Points of Discussion and Inference

- The odds of Hispanic or Latino female students were twice those of Hispanic or Latino male students for making an attempt to kill themselves [OR = 2.13 (1.86, 2.44), Figure 7], while controlling for grade and year.

- In both males and females, the odds of Hispanic or Latino students reporting the prompted mental health measures were significantly higher than in White students. When considering different levels in both race and gender, we see an even larger discrepancy between Hispanic or Latino females and White males: the odds of reporting feeling sad or hopeless were over three times that in White males [OR = 3.52 (3.35, 3.70, Figure 7], and, out of those who attempted to kill themselves, the odds of injury, poisoning, or overdose were over four times those in White males [OR = 4.68 (3.92, 5.58), Figure 7].
- The odds of Black or African American male student reporting feeling sad or hopeless were 1.22 times those of a White male student [OR = 1.22 (1.13, 1.32), Figure 8]. The discrepancy increased greatly with severity of the mental health measure. Of those students who attempted to kill themselves, the odds of a Black or African American male student's attempt resulting in injury, poisoning, or overdose were almost three times that of a White male student [OR = 2.89 (2.26, 33.70), Figure 8]. This is compared to only a 86% increase in odds in Black or African American female students over White female students.
- While there was no significant difference in the odds of American Indian or Alaska Native females who reported an attempt to kill themselves resulting in injury, poisoning, or overdose compared to American Indian or Alaska Native males, the odds of American Indian or Alaska Native females who reported 'Yes' were almost five times that of White males [OR = 4.96 (3.21, 7.65), Figure 9].

Note here the large sample error (length of the confidence interval) due to small sample size. The results of this report are representative only of those students who responded to the IYS. See the limitations section.

- The odds of Asian or Pacific Islander female students increased about 20 – 35% over those of Asian or Pacific Islander male students for reporting the mental health measures (Figure 10).

Limitations

When working with survey data, bias may occur due to unrepresentative samples. Particular biases to be aware of here include

- recall or response (Are students answering accurately and honestly?),
- nonresponse (Why did students elect ‘No Response’ for certain questions?),
- underrepresentation (Are all students across Iowa represented?), and
- voluntary response (Are there certain traits in those schools or classrooms that chose to participate?).

Biases such as these may result from how students understand or interpret the survey question. One particular case of interest is the students who responded to a mental health question (e.g. reported making a plan to kill themselves), but chose not to identify in a demographic question (i.e. gender or race). Students who did not respond to the demographic questions may represent a change in how students identify their gender and/or race. This raises the question of how to interpret the effect of categories such as Mixed or Multiple, Other Race, and No Response.

Not all Iowa students for the given grades and years are represented in these Iowa Youth Survey results; the IYS response numbers and state enrollment numbers are included in Appendix A for comparison. The counts in this report are not weighted to represent statewide demographic distributions. Due to low prevalence in many of the groups, particularly when identifying by multiple demographic variables, the trends or disparities identified here represent those students who responded to the survey and should be used for descriptive purposes; these results should not be generalized for all students across the state.

Other limitations and points of discussion based on the survey methodology including data collection and cleaning can be found here: <https://iowayouthsurvey.idph.state.ia.us/>.

Appendix

IYS Response and Statewide Enrollment Counts

Table A1. Number of IYS responses and students enrolled by year and (gender, grade, or race).

Yearly Iowa Youth Survey response and Iowa statewide enrollment numbers. n (%)*

		2014		2016		2018	
		IYS	Enrollment	IYS	Enrollment	IYS	Enrollment
Overall		77139 (100)	107730 (100)	84703 (100)	110168 (100)	70451 (100)	112386 (100)
Gender	Male	38815 (50)	55204 (51)	42822 (51)	56570 (51)	35729 (51)	57757 (51)
	Female	37803 (49)	52526 (49)	41055 (48)	53598 (49)	34265 (49)	54629 (49)
	No response§	521 (1)	—	826 (1)	—	457 (1)	—
Grade	6th	26045 (34)	35824 (33)	29275 (35)	36761 (33)	24943 (35)	38276 (34)
	8th	26397 (34)	35863 (33)	29139 (34)	36576 (33)	24272 (34)	37395 (33)
	11th	24333 (32)	36043 (33)	25981 (31)	36831 (33)	20924 (30)	36715 (33)
	No response§	364 (0)	—	308 (0)	—	312 (0)	—
Race	White †	61003 (79)	85810 (80)	63191 (75)	85342 (77)	51481 (73)	85070 (76)
	Hispanic/Latino	1680 (2)	9951 (9)	6542 (8)	11430 (10)	8731 (12)	12497 (11)
	Black/African American †	3166 (4)	5746 (5)	4200 (5)	6243 (6)	3365 (5)	6925 (6)
	American Indian/Alaska Native †	709 (1)	440 (0)	799 (1)	402 (0)	464 (1)	434 (0)
	Asian †	4903 (6)	2503 (2)	2494 (3)	2805 (3)	1920 (3)	2762 (2)
	Native Hawaiian/Other Pacific Islander † ‡	—	173 (0)	—	237 (0)	244 (0)	346 (0)
	Mixed/Multiple Races †	4279 (6)	3107 (3)	5458 (6)	3709 (3)	2865 (4)	4352 (4)
	Other Race †§	844 (1)	—	1018 (1)	—	865 (1)	—
	No response †§	555 (1)	—	1001 (1)	—	516 (1)	—

The number n (%) of students who responded to the IYS out of total enrollment by year: 2014 [77139 (72)], 2016 [84703 (77)], 2018 [70451 (63)].

* Proportions are out of the total number of students who responded to the IYS or were enrolled in Iowa statewide, respectively, by year.

** Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

§ Statewide enrollment categories did not include Other or No response race categories.

Table A2. Number of IYS responses and students enrolled by year, gender, and grade.

Yearly Iowa Youth Survey response and Iowa statewide enrollment numbers. n (%)^{*}

		2014		2016		2018	
		IYS	Enrollment	IYS	Enrollment	IYS	Enrollment
Overall		77139 (100)	107730 (100)	84703 (100)	110168 (100)	70451 (100)	112386 (100)
Male	6th	13147 (17)	18364 (17)	14776 (17)	18886 (17)	12631 (18)	19637 (17)
	8th	13274 (17)	18350 (17)	14780 (17)	18752 (17)	12365 (18)	19178 (17)
	11th	12255 (16)	18490 (17)	13130 (16)	18932 (17)	10592 (15)	18942 (17)
	No response§	139 (0)	—	136 (0)	—	141 (0)	—
Female	6th	12749 (17)	17460 (16)	14211 (17)	17875 (16)	12148 (17)	18639 (17)
	8th	12989 (17)	17513 (16)	14090 (17)	17824 (16)	11753 (17)	18217 (16)
	11th	11949 (15)	17553 (16)	12651 (15)	17899 (16)	10233 (15)	17773 (16)
	No response§	116 (0)	—	103 (0)	—	131 (0)	—
No response§	6th	149 (0)	—	288 (0)	—	164 (0)	—
	8th	134 (0)	—	269 (0)	—	154 (0)	—
	11th	129 (0)	—	200 (0)	—	99 (0)	—
	No response§	109 (0)	—	69 (0)	—	40 (0)	—

The number n (%) of students who responded to the IYS out of total enrollment by year: 2014 [77139 (72)], 2016 [84703 (77)], 2018 [70451 (63)].

^{*} Proportions are out of the total number of students who responded to the IYS or were enrolled in Iowa statewide, respectively, by year.

^{**} Counts < 6 suppressed to protect student confidentiality.

[†] Non-Hispanic

[‡] The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

[§] Statewide enrollment categories did not include Other or No response race categories.

Table A3. Number of IYS responses and students enrolled by year, grade, and race.

Yearly Iowa Youth Survey response and Iowa statewide enrollment numbers. n (%)*

		2014		2016		2018	
		IYS	Enrollment	IYS	Enrollment	IYS	Enrollment
Overall		77139 (100)	107730 (100)	84703 (100)	110168 (100)	70451 (100)	112386 (100)
6th	White †	20167 (26)	28124 (26)	21023 (25)	28052 (25)	17640 (25)	28672 (26)
	Hispanic/Latino	554 (1)	3525 (3)	2346 (3)	4060 (4)	3182 (5)	4396 (4)
	Black/African American †	1155 (1)	1979 (2)	1597 (2)	2122 (2)	1288 (2)	2405 (2)
	American Indian/Alaska Native †	308 (0)	136 (0)	368 (0)	131 (0)	194 (0)	149 (0)
	Asian †	1728 (2)	880 (1)	843 (1)	873 (1)	628 (1)	889 (1)
	Native Hawaiian/Other Pacific Islander † ‡	0 (0)	62 (0)	0 (0)	86 (0)	89 (0)	118 (0)
	Mixed/Multiple Races †	1503 (2)	1118 (1)	2105 (2)	1437 (1)	1188 (2)	1647 (1)
	Other Race †§	371 (0)	0 (0)	467 (1)	0 (0)	438 (1)	0 (0)
	No response †§	259 (0)	—	526 (1)	—	296 (0)	—
8th	White †	20757 (27)	28502 (26)	21783 (26)	28441 (26)	17607 (25)	28255 (25)
	Hispanic/Latino	572 (1)	3365 (3)	2335 (3)	3749 (3)	3098 (4)	4186 (4)
	Black/African American †	1128 (1)	1933 (2)	1460 (2)	2068 (2)	1188 (2)	2291 (2)
	American Indian/Alaska Native †	238 (0)	153 (0)	261 (0)	136 (0)	166 (0)	137 (0)
	Asian †	1764 (2)	774 (1)	862 (1)	927 (1)	665 (1)	899 (1)
	Native Hawaiian/Other Pacific Islander † ‡	0 (0)	67 (0)	0 (0)	74 (0)	78 (0)	119 (0)
	Mixed/Multiple Races †	1588 (2)	1069 (1)	1908 (2)	1181 (1)	1064 (2)	1508 (1)
	Other Race †§	232 (0)	0 (0)	295 (0)	0 (0)	285 (0)	0 (0)
	No response †§	118 (0)	—	235 (0)	—	121 (0)	—
11th	White †	19911 (26)	29184 (27)	20226 (24)	28849 (26)	16045 (23)	28143 (25)
	Hispanic/Latino	543 (1)	3061 (3)	1840 (2)	3621 (3)	2418 (3)	3915 (3)
	Black/African American †	863 (1)	1834 (2)	1116 (1)	2053 (2)	867 (1)	2229 (2)
	American Indian/Alaska Native †	162 (0)	151 (0)	163 (0)	135 (0)	103 (0)	148 (0)
	Asian †	1385 (2)	849 (1)	786 (1)	1005 (1)	619 (1)	974 (1)
	Native Hawaiian/Other Pacific Islander † ‡	0 (0)	44 (0)	0 (0)	77 (0)	76 (0)	109 (0)
	Mixed/Multiple Races †	1159 (2)	920 (1)	1429 (2)	1091 (1)	600 (1)	1197 (1)
	Other Race †§	237 (0)	0 (0)	249 (0)	0 (0)	138 (0)	0 (0)
	No response †§	73 (0)	—	172 (0)	—	58 (0)	—
No response§	White †	168 (0)	—	159 (0)	—	189 (0)	—
	Hispanic/Latino	11 (0)	—	21 (0)	—	33 (0)	—
	Black/African American †	20 (0)	—	27 (0)	—	22 (0)	—
	American Indian/Alaska Native †	**	—	7 (0)	—	**	—
	Asian †	26 (0)	—	**	—	8 (0)	—

Yearly Iowa Youth Survey response and Iowa statewide enrollment numbers. n (%)^{*} (*continued*)

Native Hawaiian/Other Pacific Islander † ‡	0 (0)	—	0 (0)	—	**	—
Mixed/Multiple Races †	29 (0)	—	16 (0)	—	13 (0)	—
Other Race †§	**	—	7 (0)	—	**	—
No response †§	105 (0)	—	68 (0)	—	41 (0)	—

The number n (%) of students who responded to the IYS out of total enrollment by year: 2014 [77139 (72)], 2016 [84703 (77)], 2018 [70451 (63)].

^{*} Proportions are out of the total number of students who responded to the IYS or were enrolled in Iowa statewide, respectively, by year.

^{**} Counts < 6 suppressed to protect student confidentiality.

[†] Non-Hispanic

[‡] The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

[§] Statewide enrollment categories did not include Other or No response race categories.

Table A4. Number of IYS responses and students enrolled by year, gender, and race.

Yearly Iowa Youth Survey response and Iowa statewide enrollment numbers. n (%)*

		2014		2016		2018	
		IYS	Enrollment	IYS	Enrollment	IYS	Enrollment
Overall		77139 (100)	107730 (100)	84703 (100)	110168 (100)	70451 (100)	112386 (100)
Male	White †	30692 (40)	44038 (41)	32102 (38)	43884 (40)	26245 (37)	43817 (39)
	Hispanic/Latino	830 (1)	5097 (5)	3230 (4)	5849 (5)	4288 (6)	6342 (6)
	Black/African American †	1688 (2)	2970 (3)	2284 (3)	3280 (3)	1771 (3)	3598 (3)
	American Indian/Alaska Native †	388 (1)	227 (0)	432 (1)	205 (0)	249 (0)	212 (0)
	Asian †	2408 (3)	1242 (1)	1245 (1)	1391 (1)	935 (1)	1362 (1)
	Native Hawaiian/Other Pacific Islander † ‡	0 (0)	89 (0)	0 (0)	125 (0)	139 (0)	179 (0)
	Mixed/Multiple Races †	2145 (3)	1541 (1)	2666 (3)	1836 (2)	1444 (2)	2247 (2)
	Other Race †§	469 (1)	0 (0)	560 (1)	0 (0)	480 (1)	0 (0)
	No response †§	195 (0)	—	303 (0)	—	178 (0)	—
Female	White †	30107 (39)	41772 (39)	30876 (36)	41458 (38)	25048 (36)	41253 (37)
	Hispanic/Latino	837 (1)	4854 (5)	3258 (4)	5581 (5)	4390 (6)	6155 (5)
	Black/African American †	1450 (2)	2776 (3)	1892 (2)	2963 (3)	1574 (2)	3327 (3)
	American Indian/Alaska Native †	315 (0)	213 (0)	356 (0)	197 (0)	213 (0)	222 (0)
	Asian †	2464 (3)	1261 (1)	1238 (1)	1414 (1)	975 (1)	1400 (1)
	Native Hawaiian/Other Pacific Islander † ‡	0 (0)	84 (0)	0 (0)	112 (0)	104 (0)	167 (0)
	Mixed/Multiple Races †	2099 (3)	1566 (1)	2746 (3)	1873 (2)	1397 (2)	2105 (2)
	Other Race †§	366 (0)	0 (0)	447 (1)	0 (0)	372 (1)	0 (0)
	No response †§	165 (0)	—	242 (0)	—	192 (0)	—
No response§	White †	204 (0)	—	213 (0)	—	188 (0)	—
	Hispanic/Latino	13 (0)	—	54 (0)	—	53 (0)	—
	Black/African American †	28 (0)	—	24 (0)	—	20 (0)	—
	American Indian/Alaska Native †	6 (0)	—	11 (0)	—	**	—
	Asian †	31 (0)	—	11 (0)	—	10 (0)	—
	Native Hawaiian/Other Pacific Islander † ‡	0 (0)	—	0 (0)	—	**	—
	Mixed/Multiple Races †	35 (0)	—	46 (0)	—	24 (0)	—
	Other Race †§	9 (0)	—	11 (0)	—	13 (0)	—
	No response †§	195 (0)	—	456 (1)	—	146 (0)	—

The number n (%) of students who responded to the IYS out of total enrollment by year: 2014 [77139 (72)], 2016 [84703 (77)], 2018 [70451 (63)].

* Proportions are out of the total number of students who responded to the IYS or were enrolled in Iowa statewide, respectively, by year.

** Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

§ Statewide enrollment categories did not include Other or No response race categories.

Table A5. Number of IYS responses and students enrolled by year, gender, grade, and race.

Yearly Iowa Youth Survey response and Iowa statewide enrollment numbers. n (%)*

			2014		2016		2018	
			IYS	Enrollment	IYS	Enrollment	IYS	Enrollment
Overall			77139 (100)	107730 (100)	84703 (100)	110168 (100)	70451 (100)	112386 (100)
Male	6th	White †	10199 (13)	14421 (13)	10729 (13)	14483 (13)	8943 (13)	14688 (13)
		Hispanic/Latino	282 (0)	1809 (2)	1116 (1)	2058 (2)	1543 (2)	2229 (2)
		Black/African American †	594 (1)	1047 (1)	832 (1)	1078 (1)	690 (1)	1259 (1)
		American Indian/Alaska Native †	173 (0)	70 (0)	197 (0)	64 (0)	104 (0)	75 (0)
		Asian †	864 (1)	442 (0)	417 (0)	423 (0)	321 (0)	459 (0)
		Native Hawaiian/Other Pacific Islander † ‡	0 (0)	32 (0)	0 (0)	45 (0)	47 (0)	65 (0)
		Mixed/Multiple Races †	731 (1)	543 (1)	1054 (1)	735 (1)	622 (1)	862 (1)
		Other Race †§	183 (0)	—	230 (0)	—	236 (0)	—
		No response †§	121 (0)	—	201 (0)	—	125 (0)	—
	8th	White †	10420 (14)	14637 (14)	11024 (13)	14564 (13)	9027 (13)	14557 (13)
		Hispanic/Latino	279 (0)	1730 (2)	1199 (1)	1936 (2)	1553 (2)	2152 (2)
		Black/African American †	607 (1)	973 (1)	833 (1)	1113 (1)	621 (1)	1145 (1)
		American Indian/Alaska Native †	129 (0)	76 (0)	147 (0)	72 (0)	89 (0)	71 (0)
		Asian †	854 (1)	369 (0)	446 (1)	476 (0)	320 (0)	421 (0)
		Native Hawaiian/Other Pacific Islander † ‡	0 (0)	43 (0)	0 (0)	38 (0)	46 (0)	57 (0)
		Mixed/Multiple Races †	802 (1)	522 (0)	906 (1)	553 (1)	517 (1)	775 (1)
		Other Race †§	134 (0)	—	165 (0)	—	155 (0)	—
		No response †§	49 (0)	—	60 (0)	—	37 (0)	—
	11th	White †	9980 (13)	14980 (14)	10260 (12)	14837 (13)	8181 (12)	14572 (13)
		Hispanic/Latino	263 (0)	1558 (1)	902 (1)	1855 (2)	1174 (2)	1961 (2)
		Black/African American †	477 (1)	950 (1)	605 (1)	1089 (1)	446 (1)	1194 (1)
		American Indian/Alaska Native †	85 (0)	81 (0)	86 (0)	69 (0)	55 (0)	66 (0)
		Asian †	678 (1)	431 (0)	380 (0)	492 (0)	291 (0)	482 (0)
		Native Hawaiian/Other Pacific Islander † ‡	0 (0)	14 (0)	0 (0)	42 (0)	45 (0)	57 (0)
		Mixed/Multiple Races †	598 (1)	476 (0)	696 (1)	548 (0)	297 (0)	610 (1)
		Other Race †§	151 (0)	—	162 (0)	—	88 (0)	—
		No response †§	23 (0)	—	39 (0)	—	15 (0)	—
No re- sponse§		White †	93 (0)	—	89 (0)	—	94 (0)	—
		Hispanic/Latino	6 (0)	—	13 (0)	—	18 (0)	—
		Black/African American †	10 (0)	—	14 (0)	—	14 (0)	—

Yearly Iowa Youth Survey response and Iowa statewide enrollment numbers. n (%)* (continued)

		American Indian/Alaska Native †	**	—	**	—	**	—
		Asian †	12 (0)	—	**	—	**	—
		Native Hawaiian/Other Pacific Islander † ‡	0 (0)	—	0 (0)	—	**	—
		Mixed/Multiple Races †	14 (0)	—	10 (0)	—	8 (0)	—
		Other Race †§	**	—	**	—	**	—
		No response †§	**	—	**	—	**	—
Female	6th	White †	9900 (13)	13703 (13)	10227 (12)	13569 (12)	8627 (12)	13984 (12)
		Hispanic/Latino	267 (0)	1716 (2)	1205 (1)	2002 (2)	1617 (2)	2167 (2)
		Black/African American †	546 (1)	932 (1)	756 (1)	1044 (1)	588 (1)	1146 (1)
		American Indian/Alaska Native †	133 (0)	66 (0)	167 (0)	67 (0)	89 (0)	74 (0)
		Asian †	856 (1)	438 (0)	422 (0)	450 (0)	301 (0)	430 (0)
		Native Hawaiian/Other Pacific Islander † ‡	0 (0)	30 (0)	0 (0)	41 (0)	42 (0)	53 (0)
		Mixed/Multiple Races †	758 (1)	575 (1)	1035 (1)	702 (1)	556 (1)	785 (1)
		Other Race †§	183 (0)	—	234 (0)	—	195 (0)	—
		No response †§	106 (0)	—	165 (0)	—	133 (0)	—
	8th	White †	10267 (13)	13865 (13)	10674 (13)	13877 (13)	8505 (12)	13698 (12)
		Hispanic/Latino	288 (0)	1635 (2)	1122 (1)	1813 (2)	1529 (2)	2034 (2)
		Black/African American †	514 (1)	960 (1)	617 (1)	955 (1)	562 (1)	1146 (1)
		American Indian/Alaska Native †	108 (0)	77 (0)	110 (0)	64 (0)	76 (0)	66 (0)
		Asian †	899 (1)	405 (0)	410 (0)	451 (0)	345 (0)	478 (0)
		Native Hawaiian/Other Pacific Islander † ‡	0 (0)	24 (0)	0 (0)	36 (0)	31 (0)	62 (0)
		Mixed/Multiple Races †	776 (1)	547 (1)	984 (1)	628 (1)	537 (1)	733 (1)
		Other Race †§	97 (0)	—	127 (0)	—	127 (0)	—
		No response †§	40 (0)	—	46 (0)	—	41 (0)	—
	11th	White †	9870 (13)	14204 (13)	9909 (12)	14012 (13)	7822 (11)	13571 (12)
		Hispanic/Latino	277 (0)	1503 (1)	924 (1)	1766 (2)	1229 (2)	1954 (2)
		Black/African American †	382 (0)	884 (1)	506 (1)	964 (1)	416 (1)	1035 (1)
		American Indian/Alaska Native †	74 (0)	70 (0)	75 (0)	66 (0)	48 (0)	82 (0)
		Asian †	695 (1)	418 (0)	405 (0)	513 (0)	324 (0)	492 (0)
		Native Hawaiian/Other Pacific Islander † ‡	0 (0)	30 (0)	0 (0)	35 (0)	31 (0)	52 (0)
		Mixed/Multiple Races †	550 (1)	444 (0)	721 (1)	543 (0)	299 (0)	587 (1)
		Other Race †§	85 (0)	—	82 (0)	—	48 (0)	—
		No response †§	16 (0)	—	29 (0)	—	16 (0)	—
	No re- sponse§	White †	70 (0)	—	66 (0)	—	94 (0)	—

Yearly Iowa Youth Survey response and Iowa statewide enrollment numbers. n (%)* (continued)

		Hispanic/Latino	**	—	7 (0)	—	15 (0)	—
		Black/African American †	8 (0)	—	13 (0)	—	8 (0)	—
		American Indian/Alaska Native †	0 (0)	—	**	—	0 (0)	—
		Asian †	14 (0)	—	**	—	**	—
		Native Hawaiian/Other Pacific Islander † ‡	0 (0)	—	0 (0)	—	0 (0)	—
		Mixed/Multiple Races †	15 (0)	—	6 (0)	—	**	—
		Other Race †§	**	—	**	—	**	—
		No response †§	**	—	**	—	**	—
No re- response§	6th	White †	68 (0)	—	67 (0)	—	70 (0)	—
		Hispanic/Latino	**	—	25 (0)	—	22 (0)	—
		Black/African American †	15 (0)	—	9 (0)	—	10 (0)	—
		American Indian/Alaska Native †	**	—	**	—	**	—
		Asian †	8 (0)	—	**	—	6 (0)	—
		Native Hawaiian/Other Pacific Islander † ‡	0 (0)	—	0 (0)	—	0 (0)	—
		Mixed/Multiple Races †	14 (0)	—	16 (0)	—	10 (0)	—
		Other Race †§	**	—	**	—	7 (0)	—
		No response †§	32 (0)	—	160 (0)	—	38 (0)	—
	8th	White †	70 (0)	—	85 (0)	—	75 (0)	—
		Hispanic/Latino	**	—	14 (0)	—	16 (0)	—
		Black/African American †	7 (0)	—	10 (0)	—	**	—
		American Indian/Alaska Native †	**	—	**	—	**	—
		Asian †	11 (0)	—	6 (0)	—	0 (0)	—
		Native Hawaiian/Other Pacific Islander † ‡	0 (0)	—	0 (0)	—	**	—
		Mixed/Multiple Races †	10 (0)	—	18 (0)	—	10 (0)	—
		Other Race †§	**	—	**	—	**	—
		No response †§	29 (0)	—	129 (0)	—	43 (0)	—
11th		White †	61 (0)	—	57 (0)	—	42 (0)	—
		Hispanic/Latino	**	—	14 (0)	—	15 (0)	—
		Black/African American †	**	—	**	—	**	—
		American Indian/Alaska Native †	**	—	**	—	0 (0)	—
		Asian †	12 (0)	—	**	—	**	—
		Native Hawaiian/Other Pacific Islander † ‡	0 (0)	—	0 (0)	—	0 (0)	—
		Mixed/Multiple Races †	11 (0)	—	12 (0)	—	**	—

Yearly Iowa Youth Survey response and Iowa statewide enrollment numbers. n (%)* (continued)

	Other Race †§	**	—	**	—	**	—
	No response †§	34 (0)	—	104 (0)	—	27 (0)	—
No re- sponse§	White †	**	—	**	—	**	—
	Hispanic/Latino	0 (0)	—	**	—	0 (0)	—
	Black/African American †	**	—	0 (0)	—	0 (0)	—
	American Indian/Alaska Native †	0 (0)	—	**	—	0 (0)	—
	Asian †	0 (0)	—	0 (0)	—	0 (0)	—
	Native Hawaiian/Other Pacific Islander † ‡	0 (0)	—	0 (0)	—	0 (0)	—
	Mixed/Multiple Races †	0 (0)	—	0 (0)	—	0 (0)	—
	Other Race †§	**	—	0 (0)	—	**	—
	No response †§	100 (0)	—	63 (0)	—	38 (0)	—

The number n (%) of students who responded to the IYS out of total enrollment by year: 2014 [77139 (72)], 2016 [84703 (77)], 2018 [70451 (63)].

* Proportions are out of the total number of students who responded to the IYS or were enrolled in Iowa statewide, respectively, by year.

** Counts < 6 suppressed to protect student confidentiality.

† Non-Hispanic

‡ The Asian race category in 2014 and 2016 was identified as separate Asian and Native Hawaiian or Other Pacific Islander race categories in 2018.

§ Statewide enrollment categories did not include Other or No response race categories.