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Identity and Suicide: An Analysis of the Connections Between Demographic Characteristics and Suicide Behaviors in Adolescents

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Acknowledgements

Thesis Summary

The Youth Risk Behaviors Survey is a questionnaire developed by the Centers for Disease Control and Prevention (CDC) in order to monitor "priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth and adults in the United States" (CDC, 2017). This thesis uses Cochran-Mantel-Haenszel tests to determine if there are statistically significant relationships between age, sex, ethnicity, and English proficiency and a participant's response to each question about suicide behaviors on the 2015 Youth Risk Behavior Survey. Each demographic category exhibited a statistically significant relationship with at least two different suicide behaviors, with some showing connections with all five behaviors.

Introduction

The Centers for Disease Control and Prevention (CDC) report that 17% of deaths of people aged 10-24 in the United States were due to suicide in 2014 (CDC, 2015). Although the damage that depression is capable of inflicting upon young people in the United States is apparent, the etiology of major depressive disorder is not easily discerned. Many have linked the disorder to altered production or metabolism of the neurotransmitter serotonin, improper interactions between the hypothalamic-pituitary-adrenal axis, abnormal glutamate signaling, and more (aan het Rot, M., Mathew, S. J., & Charney, D. S., 2009). In addition to these biological influences, it has been seen that social conditions often cause or exacerbate depression, as well. Analysis of longitudinal studies from 1996 to 2010 revealed that rural suicide rates are roughly double urban suicide rates for both males and females between the ages of 10 and 24 (Fontanella et al., 2015). Furthermore, gender itself has been seen to exhibit a relationship with depression, as women were found to be twice as likely as men to experience depression from early adolescence through adulthood (Nolen-Hoeksema, 2001).

Other notable influencing factors stem from several disparities that are based on race, ethnicity, and culture and, in turn, lead to differing rates of suicide and particular trends regarding these rates among minorities. Upon examination of National Youth Risk Behaviors Surveys (YRBS) from 2001 to 2015, increased rates of suicide attempt among Hispanic adolescents were found (Khubchandani & Price, 2017). Furthermore, the social disparities that lead to differences in suicide rates also create factors that put minority students from different backgrounds at risk of suicide. One study suggests that Asian American college students are at a higher risk of future depression if faced with

perfectionistic expectations from their families, as these expectations increased the likelihood of feelings of "thwarted belongingness" (Carrera & Wei, 2017). Furthermore, interaction between reported reasons for living and two factors of impulsivity, lack of premeditation and sensation seeking, was found to be associated with increased suicidal ideation in African American college students (Salami, Brooks, & Lamis, 2015). Language is another key cultural factor that influences one's risk of developing depression: a study examining Laotian refugees living in the southeastern United States revealed that greater English proficiency was associated with less depression (Nicassio, Solomon, Guest, & McCullough, 1986). A lack of English proficiency was also shown to be associated with increased symptoms of depression among Mexican immigrants (Snyder, 1987).

The problems surrounding depression and suicide among racial and ethnic minorities also extend to the willingness of youths to discuss their own feelings and experiences in this area. An analysis of responses to the 2011 YRBS suggests that these disparities are pronounced in the likelihood of students from certain backgrounds to discuss suicide: 7.6% of Caucasian students chose to omit the 2011 YRBS question concerning whether the student had attempted suicide in the previous 12 months, compared to 14.4% of American Indian and Hawaii/Alaska Native, 13.2% of Asian, 19% of African American, 13.9% of Hispanic/Latino, and 14.1% of multiracial students (Anderson, Lowry, & Wuensch, 2015). Disparities are also present in the utilization of healthcare by adolescents experiencing suicide ideation, which suggests that minority groups are more likely to delay treatment until symptoms become severe (Nestor, Cheek, & Liu, 2016).

Taken together, the studies discussed above point to two key facts in the prevention of suicide among minorities: that young people of minority backgrounds are at a higher

"risk of risk" for suicide behaviors, and that facets of different age, sex, ethnic, and linguistic experiences are influential in the incidence of suicide behaviors in these groups. This thesis will further explore the association between the demographic characteristics of age, sex, ethnicity, and English proficiency with suicide behaviors as they are presented by the 2015 YRBS.

Methods

The YRBS is a questionnaire developed by the CDC as a part of the Youth Risk Behavior Surveillance System. The purpose of the system is to monitor "priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth and adults in the United States" (CDC, 2017). The questionnaire is comprised of 99 questions that either ask for information that places a respondent in a particular demographic or inquire about a respondent's history of engaging in risk behaviors. This thesis is centered on responses to questions inquiring about suicide behaviors, as well as questions that align respondents with demographic categories.

Age was measured by the question "How old are you?" with the possible responses being "12 years old or younger," "13 years old," "14 years old," "15 years old," "16 years old," "17 years old," and "18 years old or older." Sex was measured by the question "What is your sex?" with the possible responses being "Female" or "Male."

Grade of study was measured by the question "In what grade are you?" with the possible responses being "9th grade," "10th grade," "11th grade," "12th grade," and "Ungraded or other grade."

Hispanic/Latino ethnicity was measured by the question "Are you Hispanic or Latino?" with the possible responses being "Yes" or "No."

Race was measured by the question "What is your race?" with the possible responses being "American Indian or Alaska Native," "Asian," "Black or African American," "Native Hawaiian or Other Pacific Islander," and "White."

Sadness and hopelessness were measured by the question "During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?" with the possible responses being "Yes" or "No."

Consideration of suicide was measured by the question "During the past 12 months, did you ever seriously consider attempting suicide?" with the possible responses being "Yes" or "No."

Planning a suicide attempt was measured by the question "During the past 12 months, did you make a plan about how you would attempt suicide?" with the possible responses being "Yes" or "No."

Suicide attempt frequency was measured by the question "During the past 12 months, how many times did you actually attempt suicide?" with the possible responses being "0 times," "1 time," "2 or 3 times," "4 or 5 times," and "6 or more times."

Injurious suicide attempt frequency was measured by the question "If you attempted suicide 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?" with the possible responses being "I did not attempt suicide during the past 12 months," "Yes," and "No."

English fluency was measured by the question "How well do you speak English?" with the possible responses being "Very well," "Well," "Not well," and "Not at all."

Using SAS 9.4, Cochran-Mantel-Haenszel tests were performed to determine if there were statistically significant relationships between each demographic characteristic and a participant's response to each question about suicide behaviors. To make a Cochran-Mantel-Haenszel test possible for each relationship in question, questions with more than two possible responses were dichotomously reorganized by placing responses into one of two groups. When examining relationships with age, responses of "12 years old or younger," "13 years old," "14 years old," and "15 years old" were considered "younger than 16" and responses of "16 years old," "17 years old," and "18 years old or older" were considered "16 and older." When examining relationships with English fluency, responses of "Very Well" or "Well" were considered "VW/W" and responses of "Not Well" and "Not at All" were considered "NW/NA." When examining relationships with the question "During the past 12 months, how many times did you actually attempt suicide?" responses of "0 times" were considered "No attempt" and responses of "1 time," "2 or 3 times," "4 or 5 times," and "6 or more times" were considered "At least one attempt." When examining relationships with the question "If you attempted suicide 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?" responses of "I did not attempt suicide during the past 12 months" and "No" were considered "No or did not require treatment" and responses of "Yes were considered "Required treatment."

Results

The demographic makeup of the respondents to the 2015 YRBS is shown in Table 1. Responses to questions about suicide behaviors are shown in Table 2. The level of English fluency among respondents is shown in Table 3.

Table 1. Demographic characteristics of 2015 YRBS participants

Characteristic	Frequency	Percentage
Age (years)		
12 or younger	43	0.28
13	60	0.11
14	1,744	10.82
15	5,561	24.53
16	9,594	25.92
17	13,427	24.64
18 or older	15,558	17.7
Missing	66	-
Sex		
Female	7757	50.03
Male	7749	49.97
Missing	118	-
Hispanic/Latino		
Yes	5,128	33.34
No	10,251	66.66
Missing	245	-
Race/Ethnicity		
American Indian/Alaska Native	163	1.07
Asian	627	4.11

Black or African American	1667	10.92
Native Hawaiian or other Pacific Islander	100	0.66
White	6849	44.86
Hispanic/Latino	2365	15.49
Multiracial Hispanic	2756	18.05
Multiracial Non-Hispanic	739	4.84
Missing	358	-

Table 2. Responses to questions about suicide behaviors

Response	Frequency	Percentage
Sadness or hopelessness		
Yes	4789	30.99
No	10,666	69.01
Missing	169	-
Consideration of suicide		
Yes	2,808	18.19
No	12,626	81.81
Missing	190	-
Suicide plan		
Yes	2,331	15.40
No	12,810	84.60
Missing	483	-
Suicide attempt frequency		
No attempt	11,364	90.43
1 attempt	631	5.02

2-3 attempts	374	2.98
4-5 attempts	79	0.63
6 or more attempts	119	0.95
Missing	3,057	-
Injurious suicide attempt frequency		
Did not attempt	11,148	90.41
Injurious	399	3.24
Not injurious	784	6.36
Missing	3,293	-
Frequency of injurious suicide attempts requiring treatment		
Required treatment	399	3.24
No or did not require treatment	11,932	96.76
Missing	3,293	-

Table 3. Level of English fluency

Response	Frequency	Percentage
English fluency		
Very Well	9,242	82.42
Well	1,754	15.64
Not Well	141	1.26
Not at All	76	0.68
Missing	4,411	-

The Cochran-Mantel-Haenszel tests revealed statistically significant relationships between each demographic group and responses to questions about suicide behaviors. Age was found to influence a respondent's likelihood to report having made a suicide plan (p = 0.0413) and having made a suicide attempt (p = <0.001). These results are shown in Table 4. Sex was found to influence a respondent's likelihood to report having felt sad or hopeless (p = <0.001), having considered suicide (p = <0.001), having made a suicide plan (p = <0.001), having attempted suicide (p = <0.001), and having made an injurious suicide attempt requiring treatment (p = <0.001). These results are shown in Table 5. Hispanic/Latino identity was found to influence a respondent's likelihood to report having felt sad or hopeless (p = <0.001) and having attempted suicide (p = 0.0057). These results are shown in Table 6. English proficiency was found to influence a respondent's likelihood to report having felt sad or hopeless (p = 0.0020), having considered suicide (p = <0.001), having made a suicide plan (p = <0.001), having attempted suicide (p = <0.001), and having made an injurious suicide attempt requiring treatment (p = <0.001). These results are shown in Table 7.

Table 4. Odds Ratios of **age** by **suicide behaviors**. 2015 YRBS Participants (n=15,624)

Demographic	Suicide behavior	Non-suicide behavior	Unadjusted OR	95% CI
Age	**Suicide plan**	**No plan**		
Younger than 16	871	4,507	1.1000	(1.0037, 1.2054)
16 and older	1,450	8,253	Ref.	-
Age	**Suicide attempt**	**No attempt**		
Younger than 16	476	3,853	1.2764	(1.1298, 1.4421)
16 and older	723	7,470	Ref.	-

Table 5. Odds Ratios of **sex** by **suicide behaviors.** 2015 YRBS Participants (n=15,624)

Demographic	Suicide behavior	Non-suicide behavior	Unadjusted OR	95% CI
Sex	**Sad/hopeless**	**Not sad/hopeless**		
Female	3,147	4,541	2.6161	(2.4359, 2.8097)
Male	1,604	6,055	Ref.	-
Sex	**Considered suicide**	**Did not consider suicide**		
Female	1,852	5,822	2.2838	(2.0955, 2.4891)
Male	936	6,720	Ref.	-
Sex	**Suicide plan**	**No plan**		
Female	1,535	6,001	2.2221	(2.0245, 2.4391)
Male	774	6,724	Ref.	-
Sex	**Suicide attempt**	**No attempt**		
Female	831	5,581	2.4150	(2.1226, 2.7477)
Male	360	5,773	Ref.	-
Sex	**Injurious attempt**	**No injury or N/A**		
Female	271	5,961	2.1099	(1.7037, 2.6129)
Male	127	5,894	Ref.	-

Table 6. Odds Ratios of **ethnicity** by **suicide behaviors**. 2015 YRBS Participants (n=15,624)

Demographic	Suicide behavior	Non-suicide behavior	Unadjusted OR	95% CI
Age	**Sad/hopeless**	**Not sad/hopeless**		
Hispanic/Latino	1,758	3,317	1.2859	(1.1967, 1,3818)
Not	2,963	7,189	Ref.	-
Age	**Suicide attempt**	**No attempt**		

Demographic				
Hispanic/Latino	459	3,909	1.1897	(1.0517, 1.3458)
Not	721	7,305	Ref.	-

Table 7. Odds Ratios of **English proficiency** by **suicide behaviors.** 2015 YRBS Participants (n=15,624)

Demographic	Suicide behavior	Non-suicide behavior	Unadjusted OR	95% CI
Eng. proficiency	Sad/hopeless	Not sad/hopeless		
Yes	3,430	7,464	0.6506	(0.4945, 0.8560)
No	89	126	Ref.	-
Eng. proficiency	Considered suicide	Did not consider suicide		
Yes	2,006	8,878	0.4425	(0.3318, 0.5902)
No	72	141	Ref.	-
Eng. proficiency	Suicide plan	No plan		
Yes	1,675	9,197	0.5166	(0.3782, 0.7055)
No	55	156	Ref.	-
Eng. proficiency	Suicide attempt	No attempt		
Yes	863	9,012	0.2606	(0.1824, 0.3721)
No	43	117	Ref.	-
Eng. proficiency	Injurious attempt	No injury or N/A		
Yes	264	9,495	0.1774	(0.1102, 0.2856)
No	21	134	Ref.	-

In summary, table 4 shows unadjusted odds ratios of 1.1000 for respondents younger than 16 versus respondents aged 16 and older for making a suicide plan, as well as 1.2764 for making a suicide attempt. Table 5 shows unadjusted odds ratios of 2.6161 for

female respondents vs male respondents for feeling sad or hopeless, 2.2838 for considering suicide, 2.2221 for making a suicide plan, 2.4150 for attempting suicide, and 2.1099 for requiring treatment for a suicide attempt. Table 6 shows unadjusted odds ratios of 1.2859 for Hispanic/Latino respondents vs non-Hispanic/Latino respondents for feeling sad or hopeless, as well as 1.1897 for making a suicide attempt. Finally, table 7 shows unadjusted odds ratios of 0.6506 for respondents proficient in English versus respondents who are not proficient in English for feeling sad or hopeless, 0.4425 for considering suicide, 0.5166 for making a suicide plan, 0.2606 for making a suicide attempt, and 0.1774 for requiring treatment for a suicide attempt.

Discussion

These analyses reveal that each demographic category that was studied exhibits a statistically significant relationship with at least two different suicide behaviors. Furthermore, they reveal that different demographic categories exhibit differing levels of influence upon the likelihood of a respondent to report having engaged in a suicide behavior, with more influential relationships being indicated by an odds ratio that is farther from 1.0000 than a less influential relationship.

Age and ethnicity were shown to be the two least influential categories, with age being the least influential of the two: students younger than 16 were only 1.1000 times more likely to report making a suicide plan and 1.2764 times more likely to report making a suicide attempt than their older peers. Meanwhile, Hispanic/Latino students were 1.2859 times more likely to report feeling sad or hopeless and 1.1897 times more likely to report making a suicide attempt than their non-Hispanic/Latino peers.

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On the other hand, sex and English proficiency were shown to be far more influential predictors of the likelihood of a respondent to report suicide behaviors, as each category exhibited a statistically significant relationship with each of the suicide behaviors. Females were shown to be at least twice as likely as their male peers to report engaging in each of the suicide behaviors, while respondents who reported low English proficiency were at least 10% more likely to report engaging in each suicide behavior. Perhaps the most striking finding comes from the raw numbers of low English proficiency respondents who reported attempting suicide and requiring treatment for a suicide attempt: 43 out of 117 students for the former, and 21 out of 134 for the latter. In other words, over one out of every three students with low English proficiency who took this survey had attempted suicide, and over one out of every ten students from the same group required treatment for a suicide attempt.

While the data obtained through these analyses are quite valuable, they are not without limitations. The YRBS questionnaire does not require a response for each question, which could influence the statistics generated, as well as the relationships that are suggested. Although a large enough group responded to each question to generate usable data, it is possible that differences in response rates could indicate a relationship quite different from the one that actually exists. Male students could, for example, be more reluctant to report engaging in suicide behaviors than females due to a concept of masculinity that requires a reluctance to acknowledge or express emotion. This would result in data suggesting lower rates of suicide behaviors among males, suggesting that less intervention is required in that population than is in reality. Such confounding variables could potentially exist in each demographic group.

Despite these limitations, the results of this study provide clear takeaways for further study. While it has been shown that female students report engaging in suicide behaviors at higher rates than males, the reasons for this are unknown. An investigation into the origins of these differences is warranted, as the possibilities for their causes are numerous: differences in hormone balances, the varying social statuses and conditioning patterns of males and females in patriarchal society, and a masculine aversion to emotion (as hypothetically discussed above) could each be highly influential. In regard to English proficiency, additional studies could examine what particular aspects of the experiences of these students lead to suicide behaviors; a lack of intimacy with classmates, isolation from the primary culture of the area, and difficulty understanding schoolwork are all potentially alienating experiences that could lead to suicide behaviors.

While such studies are important, these data suggest a need for targeted intervention on their own terms. Educators who were made aware of these relationships could tailor their approach to each student with the goal of reducing their risk of suicide behaviors. County officials who were aware of the relationships between English proficiency and suicide behaviors would be able to advocate for programs teaching English as a second language in their schools. Individual teachers who knew that female and low English proficiency students were more likely to report sadness would know that they may need to pay particularly close attention to the affect of a female student who recently immigrated from a country where English is not spoken.

Finally, it is crucial that studies such as the one completed for this thesis continue to be performed with each iteration of the YRBS. Trends such as these are subject to change, and the public health field will be able to monitor the effects of targeted interventions and

more informed educators by observing the trends that these relationships exhibit with

each biannual survey.

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Appendix

2015 National Youth Risk Behavior Survey (questionnaire only)

1.   How old are you?
      A.   12 years old or younger
      B.   13 years old
      C.   14 years old
      D.   15 years old
      E.   16 years old
      F.   17 years old
      G.   18 years old or older

2.   What is your sex?
      A.   Female
      B.   Male

3.   In what grade are you?
      A.   9th grade
      B.   10th grade
      C.   11th grade
      D.   12th grade
      E.   Ungraded or other grade

4.   Are you Hispanic or Latino?
      A.   Yes
      B.   No

5.   What is your race? **(Select one or more responses.)**
      A.   American Indian or Alaska Native
      B.   Asian
      C.   Black or African American
      D.   Native Hawaiian or Other Pacific Islander
      E.   White

6. How tall are you without your shoes on?
    Directions: Write your height in the shaded blank boxes. Fill in the matching oval below each number.

Example

Height	
Feet	**Inches**
5	*7*
③	⓪
④	①
●	②
⑥	③
⑦	④
	⑤
	⑥
	●
	⑧
	⑨
	⑩
	11 ○

Height	
Feet	**Inches**
③	⓪
④	①
⑤	②
⑥	③
⑦	④
	⑤
	⑥
	⑦
	⑧
	⑨
	⑩
	11 ○

7. How much do you weigh without your shoes on?
    Directions: Write your weight in the shaded blank boxes. Fill in the matching oval below each number.

Example

Weight		
Pounds		
1	*5*	*2*
⓪	⓪	⓪
●	①	①
②	②	●
③	③	③
	④	④
	●	⑤
	⑥	⑥
	⑦	⑦
	⑧	⑧
	⑨	⑨

Weight		
Pounds		
⓪	⓪	⓪
①	①	①
②	②	②
③	③	③
	④	④
	⑤	⑤
	⑥	⑥
	⑦	⑦
	⑧	⑧
	⑨	⑨

The next 5 questions ask about safety.

8. **When you rode a bicycle** during the past 12 months, how often did you wear a helmet?
   A. I did not ride a bicycle during the past 12 months
   B. Never wore a helmet
   C. Rarely wore a helmet
   D. Sometimes wore a helmet
   E. Most of the time wore a helmet
   F. Always wore a helmet

9. How often do you wear a seat belt when **riding** in a car driven by someone else?
   A. Never
   B. Rarely
   C. Sometimes
   D. Most of the time
   E. Always

10. During the past 30 days, how many times did you **ride** in a car or other vehicle **driven by someone who had been drinking alcohol**?
    A. 0 times
    B. 1 time
    C. 2 or 3 times
    D. 4 or 5 times
    E. 6 or more times

11. During the past 30 days, how many times did you **drive** a car or other vehicle **when you had been drinking alcohol**?
    A. I did not drive a car or other vehicle during the past 30 days
    B. 0 times
    C. 1 time
    D. 2 or 3 times
    E. 4 or 5 times
    F. 6 or more times

12. During the past 30 days, on how many days did you **text or e-mail** while **driving** a car or other vehicle?
    A. I did not drive a car or other vehicle during the past 30 days
    B. 0 days
    C. 1 or 2 days
    D. 3 to 5 days
    E. 6 to 9 days
    F. 10 to 19 days
    G. 20 to 29 days
    H. All 30 days

The next 11 questions ask about violence-related behaviors.

13. During the past 30 days, on how many days did you carry **a weapon** such as a gun, knife, or club?
    A. 0 days
    B. 1 day
    C. 2 or 3 days
    D. 4 or 5 days
    E. 6 or more days

14. During the past 30 days, on how many days did you carry **a gun**?
    A. 0 days
    B. 1 day
    C. 2 or 3 days
    D. 4 or 5 days
    E. 6 or more days

15. During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club **on school property**?
    A. 0 days
    B. 1 day
    C. 2 or 3 days
    D. 4 or 5 days
    E. 6 or more days

16. During the past 30 days, on how many days did you **not** go to school because you felt you would be unsafe at school or on your way to or from school?
    A. 0 days
    B. 1 day
    C. 2 or 3 days
    D. 4 or 5 days
    E. 6 or more days

17. During the past 12 months, how many times has someone threatened or injured you with a weapon such as a gun, knife, or club **on school property**?
    A.   0 times
    B.   1 time
    C.   2 or 3 times
    D.   4 or 5 times
    E.   6 or 7 times
    F.   8 or 9 times
    G.   10 or 11 times
    H.   12 or more times

18. During the past 12 months, how many times were you in a physical fight?
    A.   0 times
    B.   1 time
    C.   2 or 3 times
    D.   4 or 5 times
    E.   6 or 7 times
    F.   8 or 9 times
    G.   10 or 11 times
    H.   12 or more times

19. During the past 12 months, how many times were you in a physical fight in which you were injured and had to be treated by a doctor or nurse?
    A.   0 times
    B.   1 time
    C.   2 or 3 times
    D.   4 or 5 times
    E.   6 or more times

20. During the past 12 months, how many times were you in a physical fight **on school property**?
    A.   0 times
    B.   1 time
    C.   2 or 3 times
    D.   4 or 5 times
    E.   6 or 7 times
    F.   8 or 9 times
    G.   10 or 11 times
    H.   12 or more times

21.   Have you ever been physically forced to have sexual intercourse when you did not want to?
    A.   Yes
    B.   No

22.   During the past 12 months, how many times did someone you were dating or going out with physically hurt you on purpose? (Count such things as being hit, slammed into something, or injured with an object or weapon.)
    A.   I did not date or go out with anyone during the past 12 months
    B.   0 times
    C.   1 time
    D.   2 or 3 times
    E.   4 or 5 times
    F.   6 or more times

23.   During the past 12 months, how many times did someone you were dating or going out with force you to do sexual things that you did not want to do? (Count such things as
    kissing, touching, or being physically forced to have sexual intercourse.)
    A.   I did not date or go out with anyone during the past 12 months
    B.   0 times
    C.   1 time
    D.   2 or 3 times
    E.   4 or 5 times
    F.   6 or more times

The next 2 questions ask about bullying. Bullying is when 1 or more students tease, threaten, spread rumors about, hit, shove, or hurt another student over and over again. It is not bullying when 2 students of about the same strength or power argue or fight or tease each other in a friendly way.

24.   During the past 12 months, have you ever been bullied **on school property**?
    A.   Yes
    B.   No

25.   During the past 12 months, have you ever been **electronically** bullied? (Count being bullied through e-mail, chat rooms, instant messaging, websites, or texting.)
    A.   Yes
    B.   No

The next 5 questions ask about sad feelings and attempted suicide. Sometimes people feel so depressed about the future that they may consider attempting suicide, that is, taking some action to end their own life.

26.   During the past 12 months, did you ever feel so sad or hopeless almost every day for **two weeks or more in a row** that you stopped doing some usual activities?
        A.   Yes
        B.   No

27.   During the past 12 months, did you ever **seriously** consider attempting suicide?
        A.   Yes
        B.   No

28.   During the past 12 months, did you make a plan about how you would attempt suicide?
        A.   Yes
        B.   No

29.   During the past 12 months, how many times did you actually attempt suicide?
        A.   0 times
        B.   1 time
        C.   2 or 3 times
        D.   4 or 5 times
        E.   6 or more times

30.   **If you attempted suicide** 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?
        A.   **I did not attempt suicide** during the past 12 months
        B.   Yes
        C.   No

The next 8 questions ask about tobacco use.

31.   Have you ever tried cigarette smoking, even one or two puffs?
        A.   Yes
        B.   No

32. How old were you when you smoked a whole cigarette for the first time?
    A. I have never smoked a whole cigarette
    B. 8 years old or younger
    C. 9 or 10 years old
    D. 11 or 12 years old
    E. 13 or 14 years old
    F. 15 or 16 years old
    G. 17 years old or older

33. During the past 30 days, on how many days did you smoke cigarettes?
    A. 0 days
    B. 1 or 2 days
    C. 3 to 5 days
    D. 6 to 9 days
    E. 10 to 19 days
    F. 20 to 29 days
    G. All 30 days

34. During the past 30 days, on the days you smoked, how many cigarettes did you smoke **per day**?
    A. I did not smoke cigarettes during the past 30 days
    B. Less than 1 cigarette per day
    C. 1 cigarette per day
    D. 2 to 5 cigarettes per day
    E. 6 to 10 cigarettes per day
    F. 11 to 20 cigarettes per day
    G. More than 20 cigarettes per day

35. During the past 30 days, how did you **usually** get your own cigarettes? (Select only **one** response.)
    A. I did not smoke cigarettes during the past 30 days
    B. I bought them in a store such as a convenience store, supermarket, discount store, or gas station
    C. I got them on the Internet
    D. I gave someone else money to buy them for me
    E. I borrowed (or bummed) them from someone else
    F. A person 18 years old or older gave them to me
    G. I took them from a store or family member
    H. I got them some other way

36. During the past 12 months, did you ever try **to quit** smoking cigarettes?
   A. I did not smoke during the past 12 months
   B. Yes
   C. No

37. During the past 30 days, on how many days did you use **chewing tobacco, snuff, or dip**, such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen?
   A. 0 days
   B. 1 or 2 days
   C. 3 to 5 days
   D. 6 to 9 days
   E. 10 to 19 days
   F. 20 to 29 days
   G. All 30 days

38. During the past 30 days, on how many days did you smoke **cigars, cigarillos, or little cigars**?
   A. 0 days
   B. 1 or 2 days
   C. 3 to 5 days
   D. 6 to 9 days
   E. 10 to 19 days
   F. 20 to 29 days
   G. All 30 days

The next 2 questions ask about electronic vapor products, such as blu, NJOY, or Starbuzz. Electronic vapor products include e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, ehookahs, and hookah pens.

39. Have you ever used an electronic vapor product?
   A. Yes
   B. No

40. During the past 30 days, on how many days did you use an electronic vapor product?
   A. 0 days
   B. 1 or 2 days
   C. 3 to 5 days
   D. 6 to 9 days
   E. 10 to 19 days
   F. 20 to 29 days
   G. All 30 days

The next 6 questions ask about drinking alcohol. This includes drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes.

41.   During your life, on how many days have you had at least one drink of alcohol?
   A.   0 days
   B.   1 or 2 days
   C.   3 to 9 days
   D.   10 to 19 days
   E.   20 to 39 days
   F.   40 to 99 days
   G.   100 or more days

42.   How old were you when you had your first drink of alcohol other than a few sips?
   A.   I have never had a drink of alcohol other than a few sips
   B.   8 years old or younger
   C.   9 or 10 years old
   D.   11 or 12 years old
   E.   13 or 14 years old
   F.   15 or 16 years old
   G.   17 years old or older

43.   During the past 30 days, on how many days did you have at least one drink of alcohol?
   A.   0 days
   B.   1 or 2 days
   C.   3 to 5 days
   D.   6 to 9 days
   E.   10 to 19 days
   F.   20 to 29 days
   G.   All 30 days

44.   During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?
   A.   0 days
   B.   1 day
   C.   2 days
   D.   3 to 5 days
   E.   6 to 9 days
   F.   10 to 19 days
   G.   20 or more days

45. During the past 30 days, what is the largest number of alcoholic drinks you had in a row, that is, within a couple of hours?
    A. I did not drink alcohol during the past 30 days
    B. 1 or 2 drinks
    C. 3 drinks
    D. 4 drinks
    E. 5 drinks
    F. 6 or 7 drinks
    G. 8 or 9 drinks
    H. 10 or more drinks

46. During the past 30 days, how did you **usually** get the alcohol you drank?
    A. I did not drink alcohol during the past 30 days
    B. I bought it in a store such as a liquor store, convenience store, supermarket, discount store, or gas station
    C. I bought it at a restaurant, bar, or club
    D. I bought it at a public event such as a concert or sporting event
    E. I gave someone else money to buy it for me
    F. Someone gave it to me
    G. I took it from a store or family member
    H. I got it some other way

The next 4 questions ask about marijuana use. Marijuana also is called grass or pot.

47. During your life, how many times have you used marijuana?
    A. 0 times
    B. 1 or 2 times
    C. 3 to 9 times
    D. 10 to 19 times
    E. 20 to 39 times
    F. 40 to 99 times
    G. 100 or more times

48. How old were you when you tried marijuana for the first time?
    A. I have never tried marijuana
    B. 8 years old or younger
    C. 9 or 10 years old
    D. 11 or 12 years old
    E. 13 or 14 years old
    F. 15 or 16 years old
    G. 17 years old or older

49. During the past 30 days, how many times did you use marijuana?
    A.   0 times
    B.   1 or 2 times
    C.   3 to 9 times
    D.   10 to 19 times
    E.   20 to 39 times
    F.   40 or more times

50. During the past 30 days, how did you **usually** use marijuana?
    A.   I did not use marijuana during the past 30 days
    B.   I smoked it in a joint, bong, pipe, or blunt
    C.   I ate it in food such as brownies, cakes, cookies, or candy
    D.   I drank it in tea, cola, alcohol, or other drinks
    E.   I vaporized it
    F.   I used it some other way

The next 11 questions ask about other drugs.

51. During your life, how many times have you used **any** form of cocaine, including powder, crack, or freebase?
    A.   0 times
    B.   1 or 2 times
    C.   3 to 9 times
    D.   10 to 19 times
    E.   20 to 39 times
    F.   40 or more times

52. During your life, how many times have you sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high?
    A.   0 times
    B.   1 or 2 times
    C.   3 to 9 times
    D.   10 to 19 times
    E.   20 to 39 times
    F.   40 or more times

53. During your life, how many times have you used **heroin** (also called smack, junk, or China White)?
   A.   0 times
   B.   1 or 2 times
   C.   3 to 9 times
   D.   10 to 19 times
   E.   20 to 39 times
   F.   40 or more times

54. During your life, how many times have you used **methamphetamines** (also called speed, crystal, crank, or ice)?
   A.   0 times
   B.   1 or 2 times
   C.   3 to 9 times
   D.   10 to 19 times
   E.   20 to 39 times
   F.   40 or more times

55. During your life, how many times have you used **ecstasy** (also called MDMA)?
   A.   0 times
   B.   1 or 2 times
   C.   3 to 9 times
   D.   10 to 19 times
   E.   20 to 39 times
   F.   40 or more times

56. During your life, how many times have you used **hallucinogenic drugs**, such as LSD, acid, PCP, angel dust, mescaline, or mushrooms?
   A.   0 times
   B.   1 or 2 times
   C.   3 to 9 times
   D.   10 to 19 times
   E.   20 to 39 times
   F.   40 or more times

57. During your life, how many times have you used **synthetic marijuana** (also called K2, Spice, fake weed, King Kong, Yucatan Fire, Skunk, or Moon Rocks)?
   A.   0 times
   B.   1 or 2 times
   C.   3 to 9 times
   D.   10 to 19 times
   E.   20 to 39 times
   F.   40 or more times

58. During your life, how many times have you taken **steroid pills or shots** without a doctor's prescription?
    A.   0 times
    B.   1 or 2 times
    C.   3 to 9 times
    D.   10 to 19 times
    E.   20 to 39 times
    F.   40 or more times

59. During your life, how many times have you taken a **prescription drug** (such as OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin, or Xanax) without a doctor's prescription?
    A.   0 times
    B.   1 or 2 times
    C.   3 to 9 times
    D.   10 to 19 times
    E.   20 to 39 times
    F.   40 or more times

60. During your life, how many times have you used a needle to inject any **illegal** drug into your body?
    A.   0 times
    B.   1 time
    C.   2 or more times

61. During the past 12 months, has anyone offered, sold, or given you an illegal drug **on school property**?
    A.   Yes
    B.   No

The next 9 questions ask about sexual behavior.

62. Have you ever had sexual intercourse?
    A.   Yes
    B.   No

63.   How old were you when you had sexual intercourse for the first time?
    A.   I have never had sexual intercourse
    B.   11 years old or younger
    C.   12 years old
    D.   13 years old
    E.   14 years old
    F.   15 years old
    G.   16 years old
    H.   17 years old or older

64.   During your life, with how many people have you had sexual intercourse?
    A.   I have never had sexual intercourse
    B.   1 person
    C.   2 people
    D.   3 people
    E.   4 people
    F.   5 people
    G.   6 or more people

65.   During the past 3 months, with how many people did you have sexual intercourse?
    A.   I have never had sexual intercourse
    B.   I have had sexual intercourse, but not during the past 3 months
    C.   1 person
    D.   2 people
    E.   3 people
    F.   4 people
    G.   5 people
    H.   6 or more people

66.   Did you drink alcohol or use drugs before you had sexual intercourse the **last time**?
    A.   I have never had sexual intercourse
    B.   Yes
    C.   No

67.   The **last time** you had sexual intercourse, did you or your partner use a condom? A.
            I have never had sexual intercourse
    B.   Yes
    C.   No

68. The **last time** you had sexual intercourse, what **one** method did you or your partner use to **prevent pregnancy**? (Select only **one** response.)
    A. I have never had sexual intercourse
    B. No method was used to prevent pregnancy
    C. Birth control pills
    D. Condoms
    E. An IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon)
    F. A shot (such as Depo-Provera), patch (such as Ortho Evra), or birth control ring (such as NuvaRing)
    G. Withdrawal or some other method
    H. Not sure

69. During your life, with whom have you had sexual contact?
    A. I have never had sexual contact
    B. Females
    C. Males
    D. Females and males

70. Which of the following best describes you?
    A. Heterosexual (straight)
    B. Gay or lesbian
    C. Bisexual
    D. Not sure

The next 2 questions ask about body weight.

71. How do **you** describe your weight?
    A. Very underweight
    B. Slightly underweight
    C. About the right weight
    D. Slightly overweight
    E. Very overweight

72. Which of the following are you trying to do about your weight?
    A. **Lose** weight
    B. **Gain** weight
    C. **Stay** the same weight
    D. I am **not trying to do anything** about my weight

The next 12 questions ask about food you ate or drank during the past 7 days. Think about all the meals and snacks you had from the time you got up until you went to bed. Be sure to include food you ate at home, at school, at restaurants, or anywhere else.

73.   During the past 7 days, how many times did you drink **100% fruit juices** such as orange juice, apple juice, or grape juice? (Do **not** count punch, Kool-Aid, sports drinks, or other fruit-flavored drinks.)
  A.   I did not drink 100% fruit juice during the past 7 days
  B.   1 to 3 times during the past 7 days
  C.   4 to 6 times during the past 7 days
  D.   1 time per day
  E.   2 times per day
  F.   3 times per day
  G.   4 or more times per day

74.   During the past 7 days, how many times did you eat **fruit**? (Do **not** count fruit juice.)
  A.   I did not eat fruit during the past 7 days
  B.   1 to 3 times during the past 7 days
  C.   4 to 6 times during the past 7 days
  D.   1 time per day
  E.   2 times per day
  F.   3 times per day
  G.   4 or more times per day

75.   During the past 7 days, how many times did you eat **green salad**?
  A.   I did not eat green salad during the past 7 days
  B.   1 to 3 times during the past 7 days
  C.   4 to 6 times during the past 7 days
  D.   1 time per day
  E.   2 times per day
  F.   3 times per day
  G.   4 or more times per day

76.   During the past 7 days, how many times did you eat **potatoes**? (Do **not** count french fries, fried potatoes, or potato chips.)
  A.   I did not eat potatoes during the past 7 days
  B.   1 to 3 times during the past 7 days
  C.   4 to 6 times during the past 7 days
  D.   1 time per day
  E.   2 times per day
  F.   3 times per day
  G.   4 or more times per day

77. During the past 7 days, how many times did you eat **carrots**?
    A. I did not eat carrots during the past 7 days
    B. 1 to 3 times during the past 7 days
    C. 4 to 6 times during the past 7 days
    D. 1 time per day
    E. 2 times per day
    F. 3 times per day
    G. 4 or more times per day

78. During the past 7 days, how many times did you eat **other vegetables**? (Do **not** count green salad, potatoes, or carrots.)
    A. I did not eat other vegetables during the past 7 days
    B. 1 to 3 times during the past 7 days
    C. 4 to 6 times during the past 7 days
    D. 1 time per day
    E. 2 times per day
    F. 3 times per day
    G. 4 or more times per day

79. During the past 7 days, how many times did you drink a **can, bottle, or glass of soda or pop**, such as Coke, Pepsi, or Sprite? (Do **not** count diet soda or diet pop.)
    A. I did not drink soda or pop during the past 7 days
    B. 1 to 3 times during the past 7 days
    C. 4 to 6 times during the past 7 days
    D. 1 time per day
    E. 2 times per day
    F. 3 times per day
    G. 4 or more times per day

80. During the past 7 days, how many times did you drink **a can, bottle, or glass of a sports drink** such as Gatorade or PowerAde? (Do **not** count low-calorie sports drinks such as Propel or G2.)
    A. I did not drink sports drinks during the past 7 days
    B. 1 to 3 times during the past 7 days
    C. 4 to 6 times during the past 7 days
    D. 1 time per day
    E. 2 times per day
    F. 3 times per day
    G. 4 or more times per day

81. During the past 7 days, how many times did you drink **a bottle or glass of plain water**?
(Count tap, bottled, and unflavored sparkling water.)
A.   I did not drink water during the past 7 days
B.   1 to 3 times during the past 7 days
C.   4 to 6 times during the past 7 days
D.   1 time per day
E.   2 times per day
F.   3 times per day
G.   4 or more times per day

82. During the past 7 days, how many **glasses of milk** did you drink? (Count the milk you drank in a glass or cup, from a carton, or with cereal. Count the half pint of milk served at school as equal to one glass.)
A.   I did not drink milk during the past 7 days
B.   1 to 3 glasses during the past 7 days
C.   4 to 6 glasses during the past 7 days
D.   1 glass per day
E.   2 glasses per day
F.   3 glasses per day
G.   4 or more glasses per day

83. During the past 7 days, on how many days did you eat **breakfast**?
A.   0 days
B.   1 day
C.   2 days
D.   3 days
E.   4 days
F.   5 days
G.   6 days
H.   7 days

84. Are there any foods that you have to avoid because eating the food could cause an allergic reaction, like skin rashes, swelling, itching, vomiting, coughing, or trouble breathing?
A.   Yes
B.   No
C.   Not sure

The next 6 questions ask about physical activity.

85. During the past 7 days, on how many days were you physically active for a total of **at least 60 minutes per day**? (Add up all the time you spent in any kind of physical activity
that increased your heart rate and made you breathe hard some of the time.)
   A.   0 days
   B.   1 day
   C.   2 days
   D.   3 days
   E.   4 days
   F.   5 days
   G.   6 days
   H.   7 days

86. During the past 7 days, on how many days did you do exercises to **strengthen or tone your muscles**, such as push-ups, sit-ups, or weight lifting?
   A.   0 days
   B.   1 day
   C.   2 days
   D.   3 days
   E.   4 days
   F.   5 days
   G.   6 days
   H.   7 days

87. On an average school day, how many hours do you watch TV?
   A.   I do not watch TV on an average school day
   B.   Less than 1 hour per day
   C.   1 hour per day
   D.   2 hours per day
   E.   3 hours per day
   F.   4 hours per day
   G.   5 or more hours per day

88. On an average school day, how many hours do you play video or computer games or use a computer for something that is not school work? (Count time spent on things such as Xbox, PlayStation, an iPod, an iPad or other tablet, a smartphone, YouTube, Facebook or other social networking tools, and the Internet.)
    A. I do not play video or computer games or use a computer for something that is not school work
    B. Less than 1 hour per day
    C. 1 hour per day
    D. 2 hours per day
    E. 3 hours per day
    F. 4 hours per day
    G. 5 or more hours per day

89. In an average week when you are in school, on how many days do you go to physical education (PE) classes?
    A. 0 days
    B. 1 day
    C. 2 days
    D. 3 days
    E. 4 days
    F. 5 days

90. During the past 12 months, on how many sports teams did you play? (Count any teams run by your school or community groups.)
    A. 0 teams
    B. 1 team
    C. 2 teams
    D. 3 or more teams

The next 9 questions ask about other health-related topics.

91. Have you ever been tested for HIV, the virus that causes AIDS? (Do **not** count tests done if you donated blood.)
    A. Yes
    B. No
    C. Not sure

92. During the past 12 months, how many times did you use an indoor tanning device such as a sunlamp, sunbed, or tanning booth? (Do **not** count getting a spray-on tan.)
    A. 0 times
    B. 1 or 2 times
    C. 3 to 9 times
    D. 10 to 19 times
    E. 20 to 39 times
    F. 40 or more times
93. During the past 12 months, how many times have you had a sunburn? (Count the number of times even a small part of your skin turned red or hurt for 12 hours or more after being
    outside in the sun or after using a sunlamp or other indoor tanning device.)
    A. 0 times
    B. 1 time
    C. 2 times
    D. 3 times
    E. 4 times
    F. 5 or more times

94. When was the last time you saw a dentist for a check-up, exam, teeth cleaning, or other dental work?
    A. During the past 12 months
    B. Between 12 and 24 months ago
    C. More than 24 months ago
    D. Never
    E. Not sure

95. Has a doctor or nurse ever told you that you have asthma?
    A. Yes
    B. No
    C. Not sure

96. On an average school night, how many hours of sleep do you get?
    A. 4 or less hours
    B. 5 hours
    C. 6 hours
    D. 7 hours
    E. 8 hours
    F. 9 hours
    G. 10 or more hours

97. During the past 12 months, how would you describe your grades in school?
    A.   Mostly A's
    B.   Mostly B's
    C.   Mostly C's
    D.   Mostly D's
    E.   Mostly F's
    F.   None of these grades
    G.   Not sure

98. Because of a physical, mental, or emotional problem, do you have serious difficulty concentrating, remembering, or making decisions?
    A.   Yes
    B.   No

99. How well do you speak English?
    A.   Very well
    B.   Well
    C.   Not well
    D.   Not at all