

Growing Up With Media: Mental Health and Psychosocial Indicators

April 2013

Researchers, public policy officials, and the general public as a whole have long been concerned about the consequences of youth's exposure to violence and sex in the media. Recent studies have documented the explosion of different types of media available to youth^{1,2} and the widespread presence of violence in these media outlets.³

This is the fifth in a series of 6 bulletins summarizing the methodology for and findings from the Growing up with Media (GuwM) Study. GuwM is a longitudinal survey of 1,586 youth aged 10-15 years at baseline. Data were collected initially between August - September, 2006, again between November, 2007 - January, 2008, and finally between August - November, 2008. The survey protocol was reviewed and approved by the Centers for Disease Control and Prevention Institutional Review Board (IRB).

As the Internet and other media types become increasingly prominent in the lives of today's youth, questions have been raised regarding what impact this has on the mental health and well being of youth. To better understand how these things co-relate, several indicators of mental health and problem behaviors were included in the Growing up with Media survey, including: caregiver-child relationships, social support, one's propensity to respond to stimuli with anger, substance use, school performance and learning disabilities, depressive symptomatology, and unprotected sexual behavior.

In this report, we provide a general overview of youth mental health and problem behaviors by age and biological sex, as well as trends across time (i.e., Wave).

The report includes the following sections:

- Section 1: Online and Offline Social Supports
- Section 2: School Performance and Developmental Disorders
- Section 3: Aggression
- Section 4: Depressive Symptoms
- Section 5: Substance Use
- Section 6: Sexual Behavior

What is Growing up with Media?

- GuwM is a longitudinal online survey of a national sample of 1,586 young people, ages 10 to 15 years at Wave 1.¹
- Because exposures and experiences online were a main interest of the survey, youth were required to have used the Internet at least once in the past 6 months. The inclusion criteria were purposefully broad to ensure a wide variability in internet experience and exposure.
- Caregivers were members of the Harris Poll Online (HPOL) opt-in panel and residents of the U.S.
- Caregivers first completed a short online survey (approximately 5 minutes).
- With caregiver permission, youth completed an online survey; approximately 25 minutes.
- The sample was purposefully balanced on youth age and sex.
- Adult participants received \$10 and youth a \$15 gift certificate at Waves 1 and 2. To increase the response rate at Wave 3, adult participants received \$20 and youth a \$25 gift certificate.
- Data were collected across three time points:
 - Wave 1: August – September, 2006
 - Wave 2: November, 2007 – January, 2008
 - Wave 3: August – November, 2008
- Data were weighted to match the U.S. Population of adults with children between the ages of 10 and 15 years. Adults were the weighting target because they were the recruitment target.
- Propensity scoring was applied to adjust for the adult's (i.e., recruitment target) propensity to be online, in HPOL, and to respond to the particular survey invitation.
- A full report on the methodology of the GuwM study is posted online at:
<http://innovativepublichealth.com/guwm-methodology-bulletin>.

¹ As a result of data cleaning activities, the final sample size for Wave 1 is 1,581 (See the Methodological Details bulletin for more details).

SECTION 1: ONLINE AND OFFLINE SOCIAL SUPPORTS

Caregiver-Child Relationships:

Youth were asked questions specific to the relationship they had with their parent or caregiver who knew the most about them. Questions were adapted from those used in the Youth Internet Safety Survey.⁴ Internal validity for the six-item caregiver-child relationship scale was acceptable (Wave 1 Cronbach’s alpha = 0.70; Wave 2 Cronbach’s alpha = 0.72; Wave 3 Cronbach’s alpha = 0.76). Wave 1 scores ranged from 10-34, with a mean of 26.11 (SE = 0.10) and median of 26; Wave 2 scores ranged from 9-34, with a mean of 25.71 (SE = 0.14) and median of 26; and Wave 3 scores ranged from 10-34, with a mean of 25.58 (SE = 0.13) and median of 26.

Overall, the majority of youth reported a positive relationship (i.e., strong emotional bond, consistent parental monitoring, little coercive discipline) with the caregiver that knew them the most.

The vast majority of youth (95-98%) reported that they get along with the caregiver that knows them best at least fairly well.

<i>Caregiver-Child Relationships: Emotional Bond – Child respondent</i>	<i>Wave 1 (n = 1,581)</i>	<i>Wave 2 (n = 1,195)</i>	<i>Wave 3 (n = 1,150)</i>
Cronbach’s alpha	0.62	0.66	0.71
You get along with this caregiver...			
Very well	73%	68%	65%
Fairly well	25%	28%	30%
Somewhat badly	2%	3%	3%
Very badly	<1%	<1%	1%
You feel this caregiver trusts you...			
All of the time	37%	33%	34%
Most of the time	40%	43%	42%
Sometimes	18%	17%	16%
Rarely	3%	5%	6%
Never	2%	2%	2%
If you were in trouble or sad you would discuss it with this caregiver...			
All of the time	28%	30%	28%
Most of the time	36%	32%	32%
Sometimes	22%	25%	25%
Rarely	11%	9%	10%
Never	4%	4%	4%

Seventy-five percent of youth reported that they felt the caregiver that knows the most about them trusts them *most of the time* or *all of the time* and less than 8% of youth felt that this caregiver *rarely* or *never*

trusts them. In comparison, youth less commonly reported that they would discuss if they were in trouble or sad with this caregiver. Despite getting older and more independent, scores indicated the level of emotional bond was relatively constant in the cohort over time.

The three-item emotional bond subscale demonstrated acceptable internal validity (Wave 1 Cronbach’s alpha = 0.62; Wave 2 Cronbach’s alpha = 0.66; Wave 3 Cronbach’s alpha = 0.71). Wave 1 scores ranged from 3-14, with a mean of 11.45 (SE = 0.07) and median of 12, Wave 2 scores ranged from 4-14, with a mean of 11.38 (SE = 0.09) and median of 12, and Wave 3 scores ranged from 3-14, with a mean of 11.19 (SE = 0.10) and median of 12.

Additionally, caregivers typically knew where youth were and who they were with when they were not at home.

<i>Caregiver-Child Relationships: Monitoring – Child respondent</i>	<i>Wave 1 (n = 1,581)</i>	<i>Wave 2 (n = 1,195)</i>	<i>Wave 3 (n = 1,150)</i>
Cronbach’s alpha	0.81	0.83	0.82
This caregiver knows where you are when you are not home			
All of the time	68%	59%	57%
Most of the time	25%	31%	33%
Sometimes	5%	7%	8%
Rarely	1%	2%	2%
Never	1%	2%	<1%
This caregiver knows who you are with when are not at home			
All of the time	66%	57%	51%
Most of the time	25%	31%	37%
Sometimes	7%	8%	10%
Rarely	1%	2%	2%
Never	1%	3%	<1%

Consistent caregiver monitoring of youth activities outside of the home (e.g., where they are, who they are with) was nearly universally endorsed by all youth. Furthermore, the rates between the two monitoring behaviors are strikingly similar. As would be expected as youth get older, a shift was noted from caregivers knowing where youth were and who they were *all of the time* to *most of the time* over the 36-month observation period.

The two-item parental monitoring subscale demonstrated acceptable internal validity (Wave 1 correlation = 0.81; Wave 2 correlation = 0.83; Wave 3 correlation = 0.82). Wave 1-Wave 3 scores ranged from 2-10. The mean for Wave 1 was 9.13 (SE = 0.05) with a median of 10, Wave 2 mean was 8.81 (SE = 0.07) with a median of 9, and Wave 3 mean was 8.81 (SE = 0.06) and median of 9.

32%-43% of youth reported that their caregiver never or rarely used coercive discipline (e.g., yelled at them, took away privileges).

<i>Caregiver-Child Relationships: Coercive Discipline – Child respondent</i>	<i>Wave 1 (n = 1,581)</i>	<i>Wave 2 (n = 1,195)</i>	<i>Wave 3 (n = 1,150)</i>
Cronbach's alpha	0.53	0.55	0.60
This person yells at you			
All of the time	3%	4%	5%
Most of the time	6%	7%	6%
Sometimes	53%	47%	49%
Rarely	32%	36%	35%
Never	6%	7%	6%
This person takes away your privileges			
All of the time	5%	6%	6%
Most of the time	8%	9%	8%
Sometimes	56%	53%	52%
Rarely	25%	26%	28%
Never	7%	6%	6%

The majority of youth said that the caregiver that knew them best *sometimes* yelled at them (47%-53%) or took away their privilege (52%-56%). Discipline is often a healthy aspect of the caregiver-child relationship so this may not be surprising. That said: excessive discipline can potentially be a cause for concern and be indicative of an unhealthy relationship. Among the cohort, 1 of every 20 youth reported that this caregiver disciplined them *all of the time*. Reasons for caregiver discipline were not queried; this information may have been helpful to provide additional insight into the appropriateness of loss of privileges or yelling experiences.

The two-item coercive discipline subscale had somewhat low internal validity (Wave 1 correlation = 0.53; Wave 2 correlation = 0.55; Wave 3 correlation = 0.60). Wave 1-Wave 3 scores ranged from 2-10. Wave 1 mean was 5.47 (SE = 0.05) with a median of 6, Wave 2 mean was 5.48 (SE = 0.06) with a median of 5, and Wave 3 mean was 5.47 (SE = 0.06) with a median of 5.

Online and Offline Social Supports:

Beginning at Wave 3, questions regarding youth’s access to social support with individuals that youth knew face to face (i.e., friends, people who were special in the youth’s life) were added to the survey. ‘Offline’ social support was measured using the Friend and Special Person subscales of the Multidimensional Scale of Perceived Social Support.⁵The eight-item scale demonstrated high internal validity (Cronbach’s alpha = 0.96); scores ranged from 8-56, with a mean of 42.72 (SE = 0.41) and median of 45.

More youth reported having offline social supports from a special person than a friend.

Type of offline social support – Child respondent	Level of agreement Wave 3 (n=1,150)						
	Very strongly agree	Strongly agree	Mildly agree	Neutral	Mildly disagree	Strongly disagree	Very strongly disagree
Offline social support from a special person (Cronbach’s alpha = 0.97)							
There is a special person in your life who cares about your feelings	27%	35%	15%	13%	3%	1%	5%
There is a special person with who you can share your joys and sorrows	25%	34%	16%	17%	3%	2%	5%
You have a special person who is a real source of comfort to you	25%	35%	15%	15%	3%	2%	5%
There is a special person who is around when you are in need	24%	33%	17%	16%	4%	2%	4%
Offline social support from friends (Cronbach’s alpha = 0.94)							
You have friends with whom you can share your joys and sorrows	20%	38%	21%	13%	3%	1%	4%
You can talk about your problems with your friends	17%	35%	22%	15%	3%	3%	5%
Your friends really try to help you	16%	36%	24%	16%	2%	3%	3%
You can count on your friends when things go wrong	16%	36%	22%	16%	3%	3%	4%

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As shown in the table on page 5, most youth had offline social support from either a special person or friend, whether it was someone who was around when the respondent was in need or someone who was there to share the respondent’s joys and sorrows. Across the different types of social support queried, 57%-70% of youth at least *strongly agreed* they had a special person and 52%-58% of youth at least *strongly agreed* they had a friend who did these things. On the other hand, one of every 20 youth *very strongly disagreed* that they received offline social supports from a friend or a special person.

Both subscales demonstrated strong internal validity (Friend subscale: Cronbach’s alpha = 0.97; Special Person subscale: Cronbach’s alpha = 0.94). The four-item offline social support friend subscale scores ranged from 4-28, with a mean of 21.11 (SE = 0.21) and median of 22. The four-item special person subscale scores ranged from 4-28, with a mean of 21.62 (SE = 0.23) and median of 24.

Given the impact of the Internet in the lives of youth today, questions were also added to get a sense of youth’s access to social support online. Youth who reported having friends online in the last year who they did not know in person were subsequently asked about the online relationship(s). These questions were based on the Friend and Special Person subscales of the Multidimensional Scale of Perceived Social Support⁵ and modified to include the word ‘online’. The eight-item offline social support scale internal validity was acceptable (Cronbach’s alpha = 0.97); scores ranged from 8-56, with a mean of 30.30 (SE = 0.88) and median of 32.

Of the 21% of youth who reported a friendship with someone they only knew online, 1-5% of youth very strongly agreed they had online support from a friend or special person.

<i>Type of online social support– Child respondent</i>	<i>Level of agreement Wave 3(n=244)</i>						
	<i>Very strongly agree</i>	<i>Strongly agree</i>	<i>Mildly agree</i>	<i>Neutral</i>	<i>Mildly disagree</i>	<i>Strongly disagree</i>	<i>Very strongly disagree</i>
Online social support from a special person (Cronbach’s alpha = 0.96)							
There is a special person <u>online</u> with who you can share your joys and sorrows	5%	10%	16%	33%	11%	11%	15%
There is a special person <u>online</u> who is around when you am in need	3%	5%	17%	36%	18%	5%	16%
You have a special person <u>online</u> who is a real source of comfort to me	3%	9%	16%	36%	15%	8%	13%
There is a special person <u>online</u> in your life who cares about your feelings	3%	9%	21%	35%	12%	8%	12%

Online social support from friends

(Cronbach's alpha = 0.95)

You have friends <u>online</u> with whom you can share your joys and sorrows	2%	12%	20%	31%	14%	7%	14%
My friends <u>online</u> really try to help me	1%	10%	27%	35%	10%	6%	11%
You can count on your friends <u>online</u> when things go wrong	1%	9%	18%	38%	13%	11%	11%
You can talk about my problems with your friends <u>online</u>	1%	11%	22%	36%	12%	8%	10%

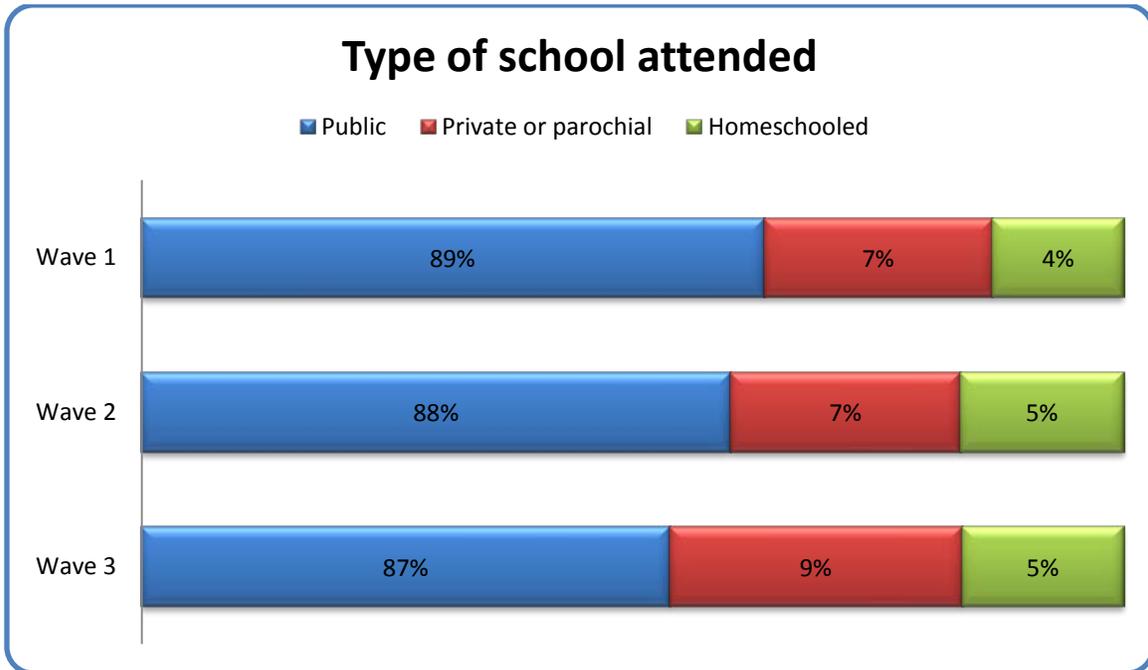
In comparison to offline social supports, among youth who reported a friendship with someone they met online and did not know in-person, fewer youth strongly agreed that they received support from this person (see Table above). In fact, most youth said that they were neutral about the support from online friends (31%-38%) or special people (33%-35%). The differences between level of agreement of support received from online and offline friends suggests that, even with the increase in popularity among social networks (e.g., Facebook) during this time, most youth continue to foster more socially supportive relationships face-to-face; or online with people that they also know in-person. The Internet can be a place to meet new people; but more often, it is a place to continue building upon offline relationships and support.

These subscales were found to be reliable (Friend subscale: Cronbach's alpha = 0.95; Special Person subscale: Cronbach's alpha = 0.96). The four-item online social support friend subscale scores ranged from 4-28, with a mean of 15.40 (SE = 0.44) and median of 16. The four-item special person subscale scores ranged from 4-28, with a mean of 14.91 (SE = 0.46) and median of 16.

SECTION 2: SCHOOL PERFORMANCE AND LEARNING DISABILITIES

School Performance:

Question regarding school characteristics and performance were asked of youth who reported attending a private or public school (i.e., not homeschooled; N_{wave1} = 1,579; N_{wave2} = 1,193; N_{wave3} = 1,144).



The majority of youth (87-89%) reported attending a public school. Less than 1 of every 10 youth reported attending a private or parochial school. About one in twenty youth were homeschooled. This diversity of education is a strength of the study, and reflects a difference between this methodology and school-based studies, which often exclude youth who are absent on the day of the survey as well as those who are homeschooled.

More than half of youth(57%) who were attending school reported getting mostly A’s or mostly A’s and B’s in school.

Grades in school – Child respondent	Wave 1 (n = 1,579)	Wave 2 (n = 1,193)	Wave 3 (n = 1,144)
Mostly A’s	16%	18%	15%
Mostly A’s and B’s	41%	39%	42%
Mostly B’s	12%	9%	11%
Mostly B’s and C’s	21%	21%	20%
Mostly C’s	4%	5%	6%
Mostly C’s and D’s	4%	5%	4%
Mostly D’s	<1%	1%	<1%
Mostly D’s and lower	1%	1%	1%
My school does not use grades ¹	--	<1%	1%

¹ This response option was not available at Wave 1.

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The majority of youth reported doing well in school (see Table on page 8). About 1 of every 3 youth reported getting *mostly B's or mostly B's and C's*; and 2% reported getting *mostly D's or lower*. One percent of youth reported that their schools did not use grades. The distribution of youth reported academic grades in school was consistent across time.

Commitment to school has been noted as a protective factor that buffers youth from engaging in violent or delinquent behavior, substance use, and other behaviors associated with negative outcomes.⁶ Starting at Wave 2, youth reported their like or dislike of school.

<i>Reported like or dislike of school – Child respondent</i>	<i>Wave 2 (n = 1,193)</i>	<i>Wave 3 (n = 1,144)</i>
Like a lot	34%	32%
Like a little	27%	30%
Neither like nor dislike	15%	18%
Dislike a little	16%	13%
Dislike a lot	7%	7%

Two of every 3 youth who were in school reported they liked school (either a lot or a little). One in every 5 youth reported that they disliked school. A small percentage of youth reported they disliked school *a lot* (7% at both Wave 2 and Wave 3).

Lastly, school-attending youth were asked how many times they had been suspended or had detention in the last school year.

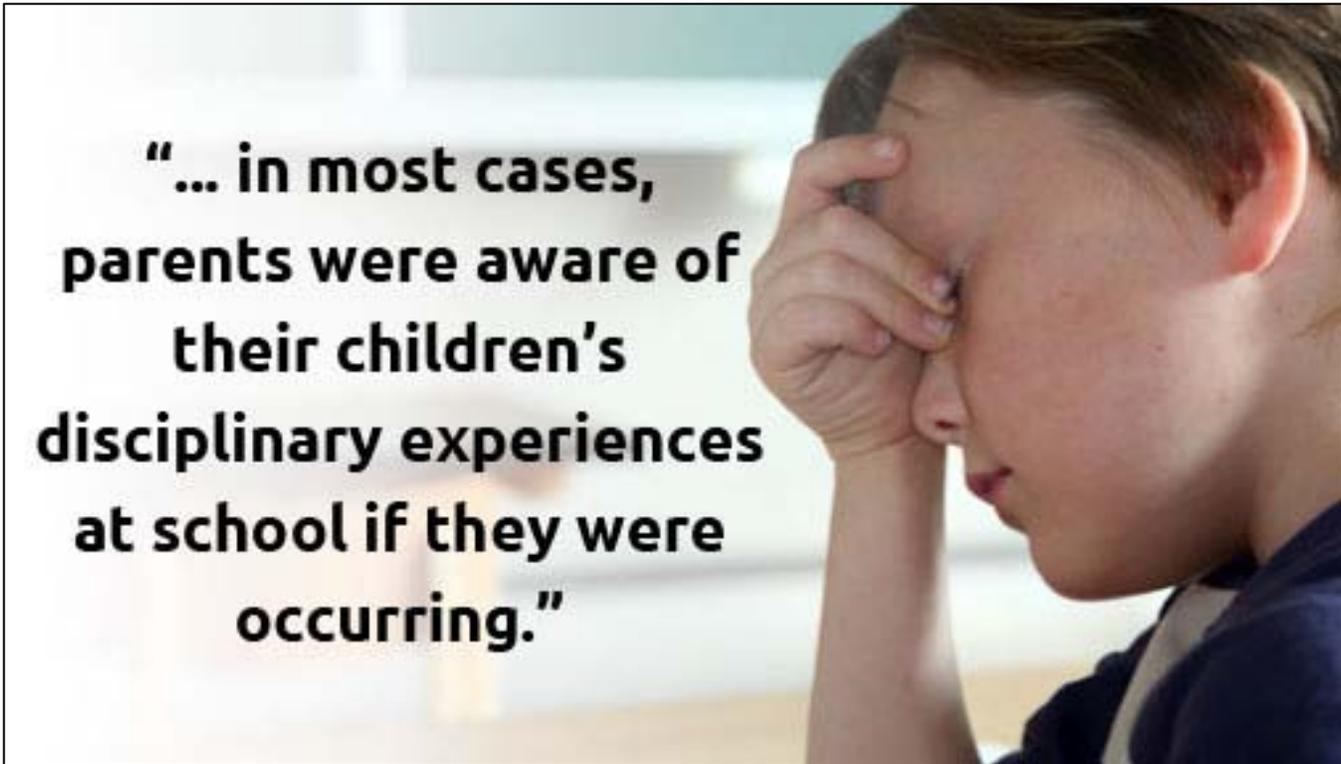
<i>Number of suspensions/ detentions in the last school year – Child respondent</i>	<i>Wave 1 (n = 1,516)</i>	<i>Wave 2 (n = 1,137)</i>	<i>Wave 3 (n = 1,092)</i>
0 times	75%	73%	70%
1 time	11%	11%	13%
2 times	6%	7%	8%
3 times	2%	4%	4%
4-9 times	4%	4%	4%
10-19 times	1%	1%	1%
20-29 times	<1%	<1%	<1%
30 or more times	<1%	<1%	<1%

Most youth (73%) were not suspended or given detention in school. Two in every 10 youth reported receiving this punishment between 1-3 times. Trends were stable across time.

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Starting at Wave 2, parents also were asked how many times their child were suspended or received a detention in the last school year. As shown in the Table on page 10, responses were similar to those provided by youth. This suggests that in most cases, parents were aware of their children’s disciplinary experiences at school if they were occurring.

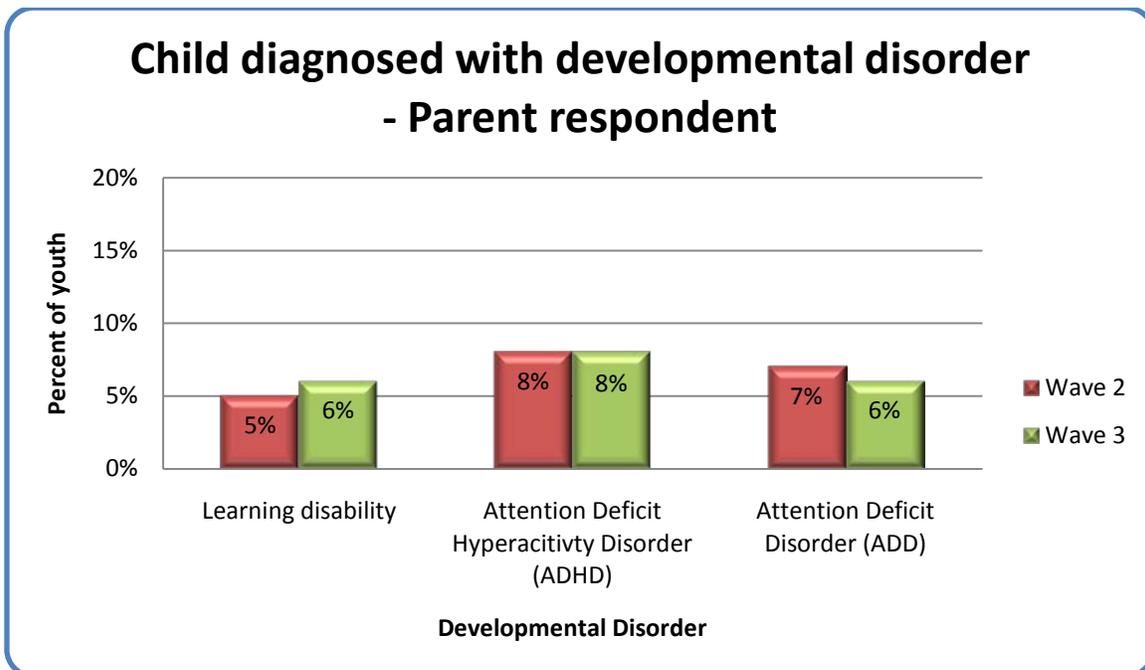
<i>Number of suspensions/ detentions child had in the last school year – Parent respondent</i>	<i>Wave 2 (n = 1,137)</i>	<i>Wave 3 (n = 1,092)</i>
0 times	77%	75%
1 time	11%	11%
2 times	7%	8%
3 times	2%	3%
4-9 times	3%	2%
10-19 times	<1%	<1%
20-29 times	<1%	<1%
30 or more times	<1%	<1%



Developmental disorders:

Developmental disorders can interfere with one's success at school, and also have been implicated in involvement with aggressive and violent behaviors.⁶ Starting at Wave 2, parents were asked whether their child was diagnosed with certain developmental disorders by a doctor or mental health professional.

More than 8 of every 10 parents (82-84%) reported that their child was not diagnosed with a developmental disorder.



Rates of the three different developmental disorders were similar and remained stable over the 24-month period, suggesting that few youth were newly diagnosed between Wave 2 and Wave 3. This would be expected given the age of the cohort at that time (13-18 years).

SECTION 3: AGGRESSION

Anger can be either a state that changes over time (e.g., I feel angry right now), or a trait that is relatively stable over time (e.g., I am generally an angry person). As a measure of trait aggressiveness, the tendency to respond to stimuli was measured by the ten-item State-Trait Anger Expression Inventory (STAXI-CA) T-Anger subscale ⁷ (Wave 1 Cronbach’s alpha = 0.85; Wave 2 Cronbach’s alpha = 0.88; Wave 3 Cronbach’s alpha = 0.87). Wave 1-Wave 3 scores ranged from 10-30. The mean for Wave 1 was 18.63 (SE = 0.16) with a median of 19, Wave 2 mean was 18.77 (SE = 0.19) with a median of 19, and Wave 3 mean was 18.81 (SE = 0.19) and median of 19.

One of every 7 (14%-17%) youth said they get angry quickly.

<i>STAXI Traits – Child respondent</i>		<i>Wave 1 (n = 1,581)</i>	<i>Wave 2 (n = 1,195)</i>	<i>Wave 3 (n = 1,150)</i>
I am hotheaded	Hardly ever true	59%	58%	57%
	Sometimes true	32%	32%	32%
	Often true	9%	10%	10%
I feel angry	Hardly ever true	54%	52%	50%
	Sometimes true	39%	41%	43%
	Often true	7%	7%	7%
I get angry quickly	Hardly ever true	50%	52%	55%
	Sometimes true	36%	34%	29%
	Often true	14%	14%	17%
I feel like yelling when I do something good and someone says I did bad	Hardly ever true	38%	35%	36%
	Sometimes true	38%	42%	40%
	Often true	24%	23%	24%
I feel annoyed when I do a good job and no one notices me	Hardly ever true	34%	31%	29%
	Sometimes true	47%	48%	50%
	Often true	19%	21%	21%
I feel grouchy	Hardly ever true	33%	33%	31%
	Sometimes true	61%	60%	62%
	Often true	6%	6%	7%
I get angry when I do well and I am told I did something wrong	Hardly ever true	30%	26%	26%
	Sometimes true	41%	42%	45%
	Often true	28%	31%	30%
I feel mad	Hardly ever true	17%	20%	22%
	Sometimes true	70%	66%	64%
	Often true	13%	14%	14%
I get mad when I am punished unfairly	Hardly ever true	17%	17%	16%
	Sometimes true	44%	43%	45%
	Often true	39%	41%	39%
I feel angry when I am blamed for something I didn’t do	Hardly ever true	13%	15%	12%
	Sometimes true	39%	36%	41%
	Often true	49%	49%	47%

Youth’s propensity to respond to a situation with anger was most commonly endorsed when they felt they were being blamed for something they didn’t do or felt like they were being punished unfairly (see Table on page 12). Youth were least likely to characterize themselves as hotheaded, to feel angry, or to get angry quickly. Consistent with the hypothesis that this scale measures a trait (i.e., something inherent and stable), rates of anger appear to be relatively constant over time.

SECTION 4: DEPRESSIVE SYMPTOMS

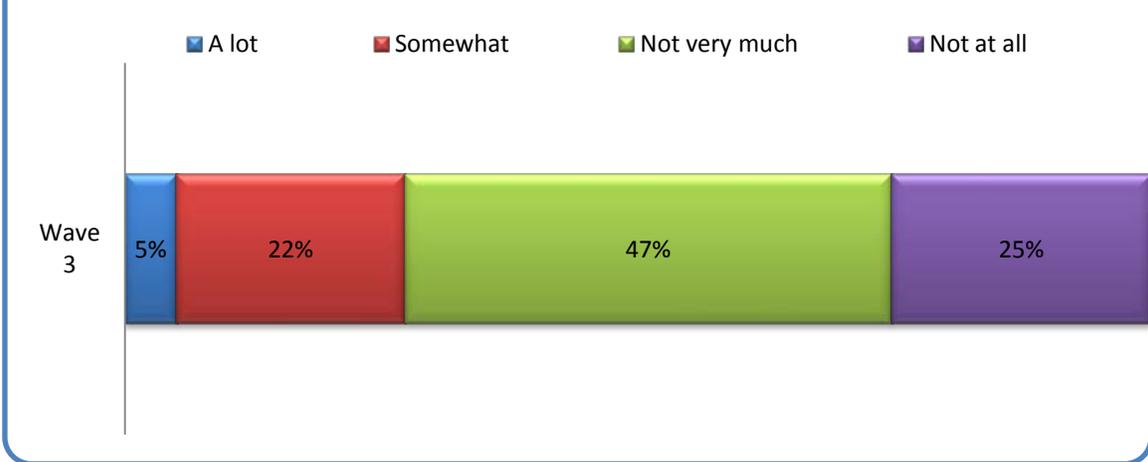
At Wave 3, a modified version of the Center for Epidemiologic Studies Depression (CESD) Scale-Revised was added to the survey instrument.⁸ Ten items were included to measure the 10 DSM-IV symptoms of major depression for children and adolescents.⁹ Internal consistency was high (Wave 3 Cronbach’s alpha = 0.90). Scores ranged from 10-50 with a mean of 14.99 (SE = 0.24) and a median of 13.

8%-44% of youth reported experiencing symptoms of depression in the past week.

<i>Depressive symptom – Child respondent</i>	<i>Frequency of symptoms Wave 3 (n=1,150)</i>				
	<i>Not at all or less than 1 day in the last week</i>	<i>1-2 days in the last week</i>	<i>3-4 days in the last week</i>	<i>5-7 days in the last week</i>	<i>Nearly every day for 2 weeks</i>
I wished I were dead	92%	4%	2%	1%	2%
I felt like a bad person	84%	11%	2%	1%	2%
I lost interest in my usual activities	83%	11%	4%	1%	2%
I felt I was moving too slowly	75%	16%	6%	2%	2%
My appetite was poor	75%	15%	5%	2%	3%
I could not focus on the important things	62%	23%	8%	4%	4%
I felt irritable	59%	26%	8%	3%	4%
My sleep was restless	58%	25%	9%	4%	4%
I felt sad	58%	29%	7%	3%	3%
I was tired all the time	56%	24%	11%	3%	6%

The majority of youth did not have any depressive symptoms in the past week or so. However, persistent symptoms of depression that lasted nearly every day for 2 weeks were reported by 2%-6% of youth. When looking at specific symptoms, being tired all the time was the most commonly endorsed symptom (44%) reported by youth, closely followed by 42% who reported they felt sad. Suicidal ideation was the least common symptom experienced in the week (8%).

Depressive symptoms interfered with life and activities among youth who experienced at least one symptom...

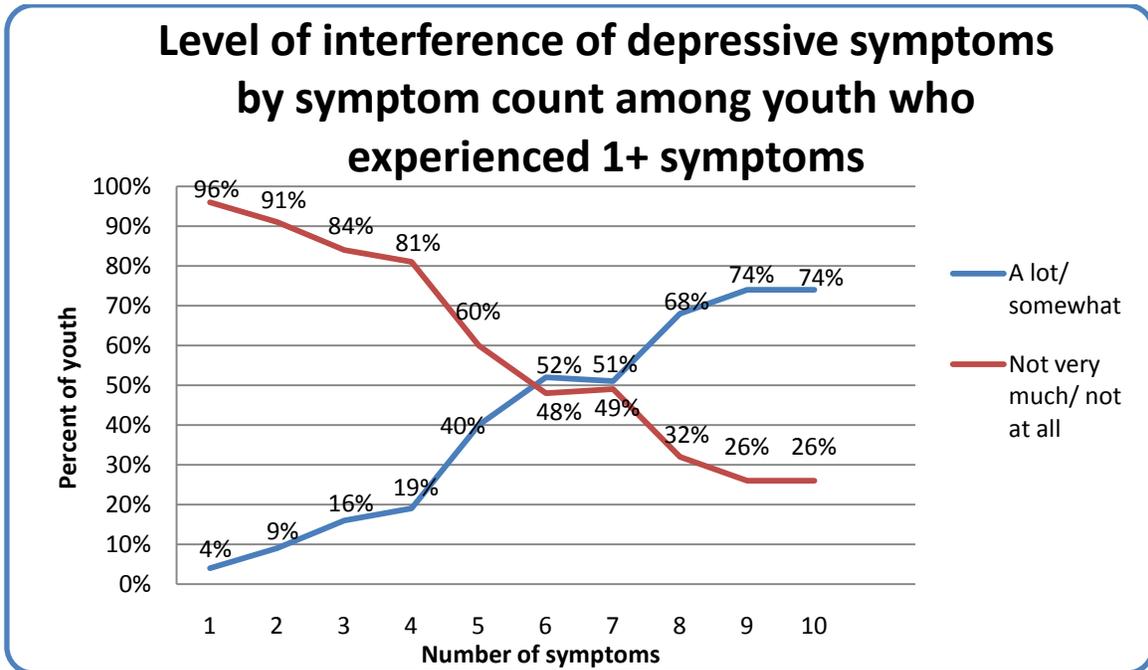


According to the DSM-IV, something must interfere with one’s life for it to be a disorder. Among youth who reported any depressive symptoms ($N_{Wave3} = 860$), most (47%) reported being not very much affected by the depressive symptom(s), with an additional 25% reporting being not at all affected. Nonetheless, one of every 20 youth who said that they experienced at least one depressive symptom in the past week or so said that their symptoms or behaviors interfered *a lot* with their life or activities.

Sixty-three percent of youth who reported symptoms of depression in the past week reported between 1 to 4 depressive symptoms.

Number of depressive symptoms experienced in the past week or so among those who reported at least one depressive symptom – Child respondent	Wave 3 (n = 860)
1 symptom	16%
2 symptoms	17%
3 symptoms	15%
4 symptoms	15%
5 symptoms	11%
6 symptoms	9%
7 symptoms	5%
8 symptoms	6%
9 symptoms	4%
10 symptoms	2%

As shown in the Table on page 14, most youth (63%) who reported symptoms of depression reported 4 or fewer symptoms. Nonetheless, more than 1 of every 3 youth reported five or more symptoms of depression in the past week.

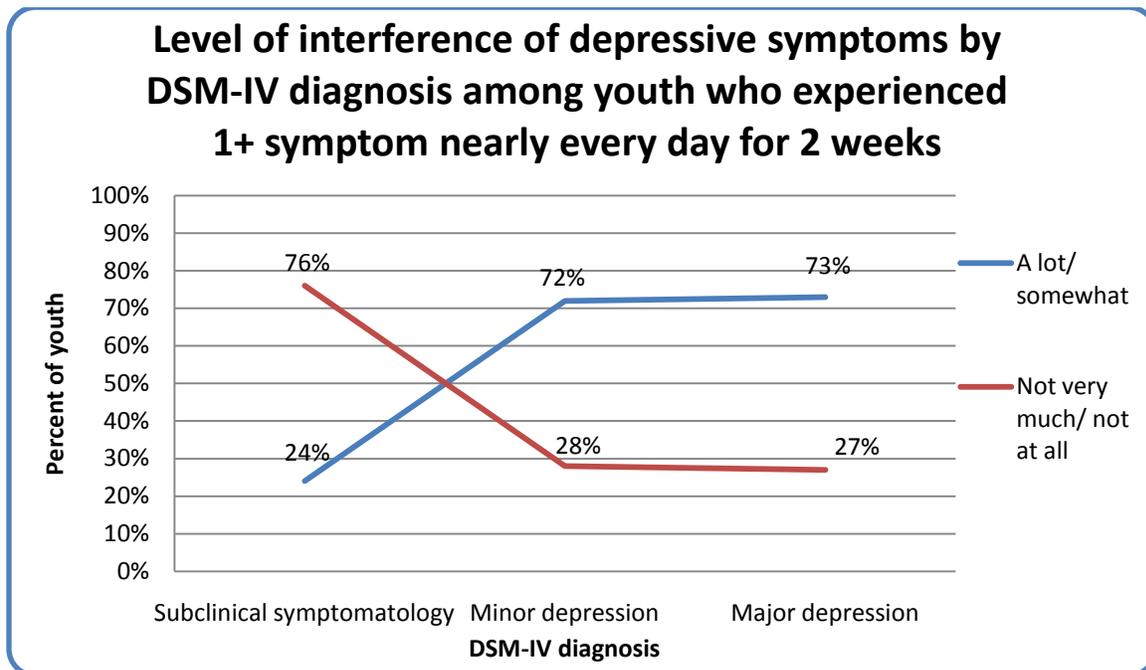


Among youth who experienced at least one depressive symptom in the past week or so ($N_{\text{Wave3}} = 860$), the interference of youth’s depressive symptoms with their life and activities appears to be explained by the number of symptoms youth had. Trend lines suggest a direct relationship between symptom count and the level of interference these symptoms had in the youth’s life: as the number of symptoms increased, so too did the percent of youth who reported being a lot or somewhat affected. For example, 74% of youth experiencing 10 symptoms said that the symptoms affected them at least somewhat compared to 4% who had 1 symptom.

Of the youth who experienced one or more depressive symptoms, 93% did not meet DSM-IV criteria for depressive disorder.

DSM-IV diagnosis among youth who reported at least one depressive symptom every day for the past 2 weeks – Child respondent	Wave 3 (n = 860)
Subclinical symptomatology (symptoms fewer than every day in the past 2 weeks)	93%
Mild depressive disorder (at least two symptoms nearly every day in the past 2 weeks)	5%
Major depressive disorder (5+ symptoms nearly every day in the past 2 weeks, one of which is sadness or loss of interest)	2%

Among youth who said they had experienced at least one depressive symptom in the past two weeks, 5% had at least two symptoms nearly every day for the past two weeks. Two percent of youth met the criteria for major depression (i.e., experiencing 5 or more symptoms nearly every day in the past 2 weeks, including sadness and/ or loss of interest).



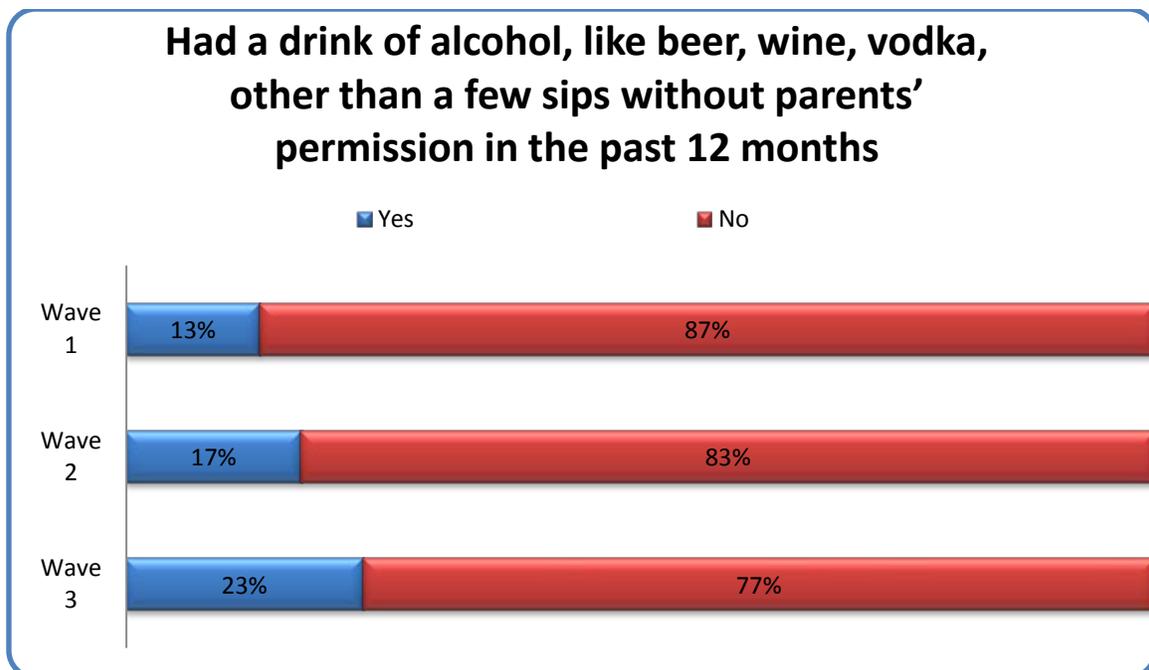
Seventy-three percent of youth who met the DSM-IV criteria for major depressive disorder (n=18) and 72% of youth who met criteria for minor depressive disorder (n=45) reported functional impairment (i.e., the symptoms interfered with their lives *somewhat* or *a lot*).

SECTION 4: SUBSTANCE USE

Substance use was assessed based upon items in the Youth Risk Behavior Surveillance (YRBS).¹⁰ Youth were asked about their past-year experience with alcohol, marijuana, inhalants, and other drugs. The 4 items were inter-related (Wave 1 Cronbach's alpha = 0.66). In Wave 2, an additional question about cigarette smoking was included (Wave 2 Cronbach's alpha = 0.73; Wave 3 Cronbach's alpha = 0.71).

Alcohol:

Among the substances queried, youth were most likely to say they had had a drink of alcohol without their parents' permission in the past 12 months.



About 1 of every 10 youth reported consuming alcohol without their parent's permission in the past 12 months. This increased to nearly 1 of every 4 youth in Wave 3 when the cohort was older. This is the most notable increase in substance use over time compared to other substances youth were asked about, suggesting that experimentation with alcohol may be the most normative among all of the substances.

Youth who had consumed alcohol in the past year ($N_{\text{Wave1}} = 182$; $N_{\text{Wave2}} = 188$; $N_{\text{Wave3}} = 264$) were asked how old they were when they had their first drink of alcohol, other than a few sips, without their parents' permission. Youth-reported age of first sip of alcohol increased by approximately one year with each Wave of the study, which is consistent with what one would expect given the increased age of the cohort and corresponding increase of youth endorsing experimentation with alcohol.

Deciphering how technology influences and can improve public health.

- At Wave 1, the mean age of first sip of alcohol was 13 years, with a range of 9-15 years old.
- At Wave 2, the mean age of first sip of alcohol was 14 years, with a range of 10-17 years old.
- At Wave 3, the mean age of first sip of alcohol was 14 years, with a range of 10-18 years old.

Fifty-one percent of youth who consumed alcohol in the past 12 months, across time, said that they did not drink alcohol in the last 30 days.

<i>Number of days at least one drink of alcohol consumed in the past 30 days among youth who had alcohol in the past 12 months– Child respondent</i>	<i>Wave 1 (n = 182)</i>	<i>Wave 2 (n = 188)</i>	<i>Wave 3 (n = 264)</i>
0 days	45%	57%	51%
1 day	28%	16%	20%
2 days	12%	12%	15%
3 days	6%	4%	6%
4-9 days	7%	8%	5%
10-19 days	1%	2%	3%
20-30 days	1%	<1%	<1%

Most youth who reported using alcohol did so infrequently. In fact, among youth who consumed alcohol in the past 12 months, the percentage of youth who reported having had one drink of alcohol in the past 30 days decreased from 28% at Wave 1 to 20% at Wave 3. Rates for those who reported drinking on 2 or more days were stable. Interestingly, despite the aging of the cohort, the percentage of youth who drank alcohol in the past 30 days was relatively stable over time.

Furthermore, among youth who consumed alcohol in the past 12 months, binge drinking was rare.

Youth who reported drinking alcohol in the past year were also asked if they had five or more drinks of alcohol in a row, which we subsequently defined as ‘binge drinking’.

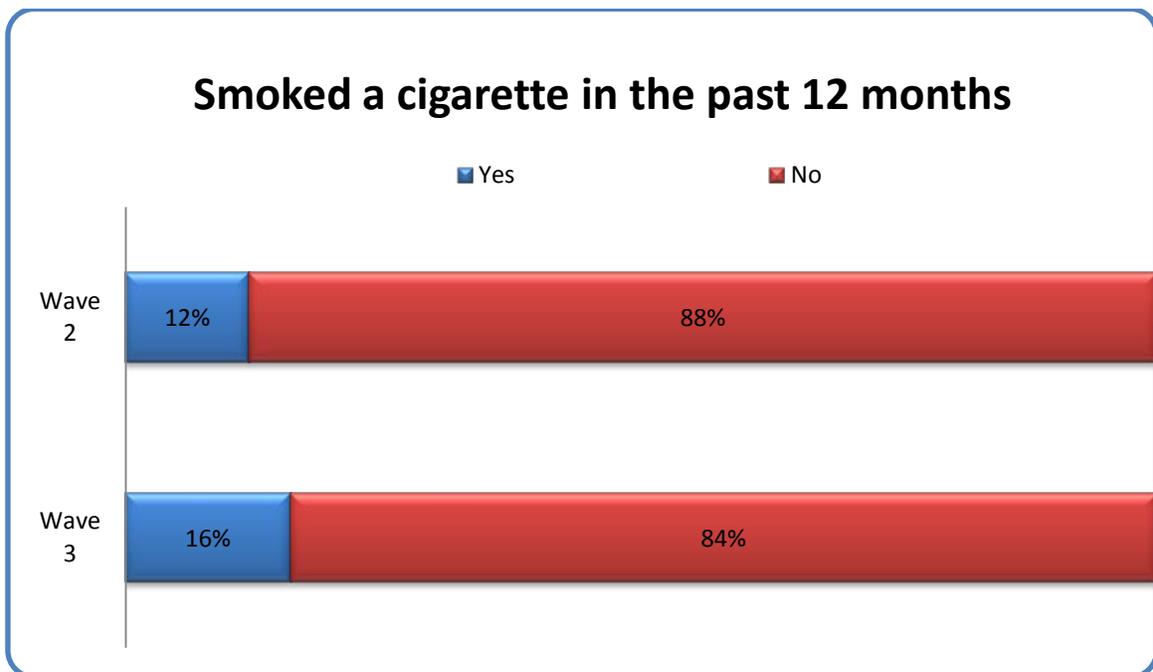
Deciphering how technology influences and can improve public health.

<i>Number of days 5 or more alcoholic drinks consumed – Child respondent</i>	<i>Wave 1 (n = 182)</i>	<i>Wave 2 (n = 188)</i>	<i>Wave 3 (n = 264)</i>
0 days	81%	86%	84%
1 day	11%	5%	9%
2 days	4%	4%	1%
3 days	2%	1%	1%
4-9 days	<1%	2%	2%
10-19 days	2%	<1%	2%
20-30 days	--	<1%	<1%

Less than 20% of youth who reported drinking in the past year ever consumed more than five alcoholic drinks consecutively in the past year. Of the youth who reported binge drinking in the past 30 days, most (5%-11%) reported doing so on one day.

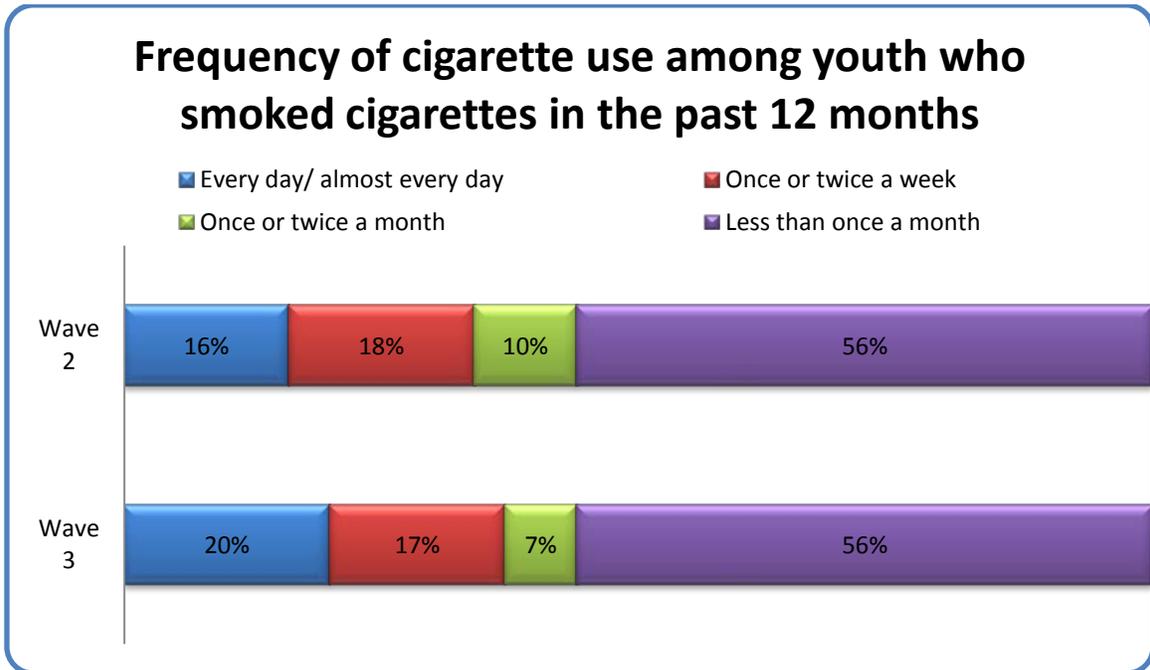
Cigarettes:

Past year cigarette smoking was the second most commonly used substance reported by the cohort.



One of every 7 youth reported smoking a cigarette in the last year.²

² This question was asked only at Waves 2 and 3.



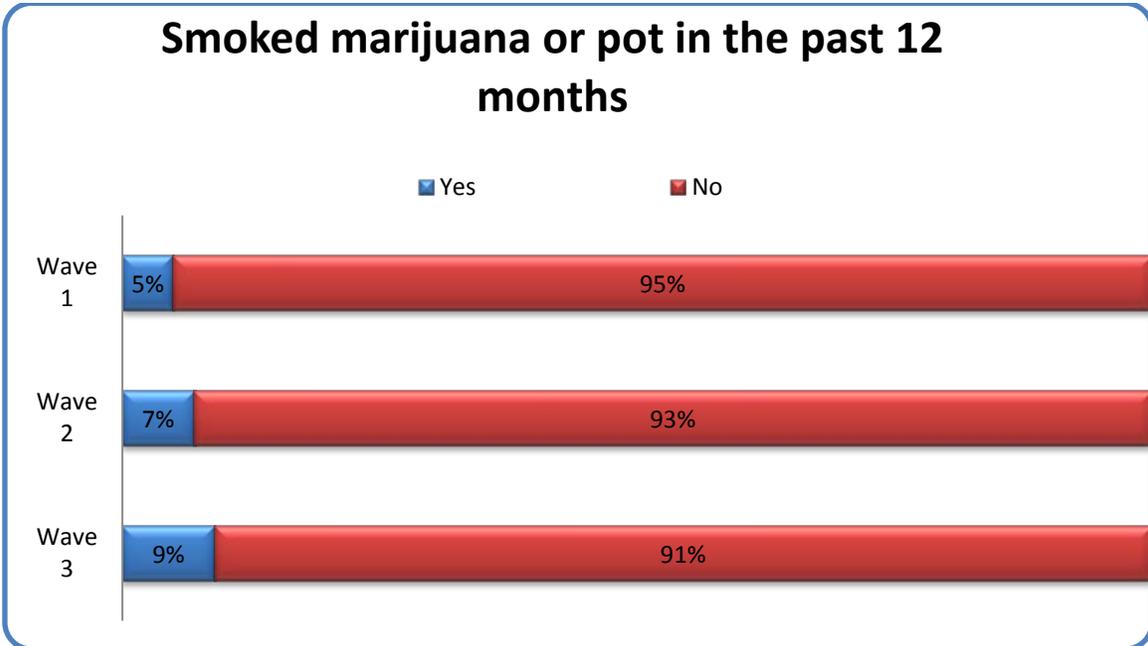
Rates of cigarette use were stable over the 24-month period from Wave 2 to Wave 3 for youth who reported smoking cigarettes in the past 12 months ($N_{\text{Wave}2} = 132$; $N_{\text{Wave}3} = 162$).³ Most youth (56%) smoked cigarettes less than once a month. Of concern, about 1 of every 5 youth who smoked cigarettes reported doing so daily.



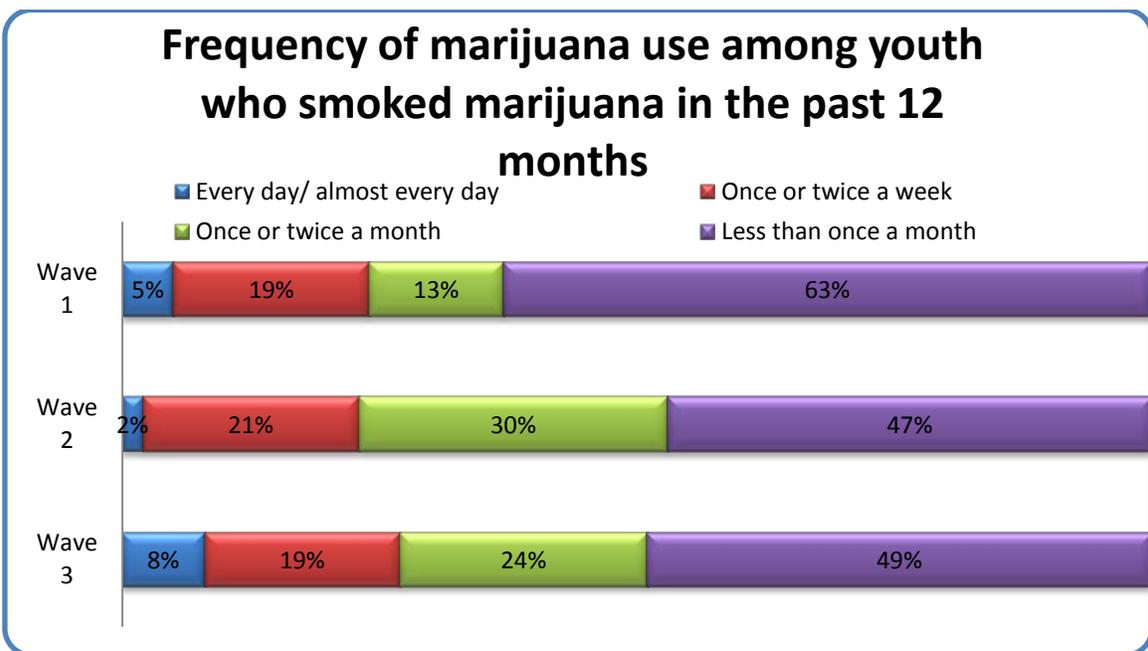
³ This question was asked only at Waves 2 and 3.

Marijuana:

Smoking marijuana or pot in the past 12 months was the third most commonly reported substance used by the cohort.



Less than 1 of every 10 youth reported smoking marijuana or pot in the past 12 months.

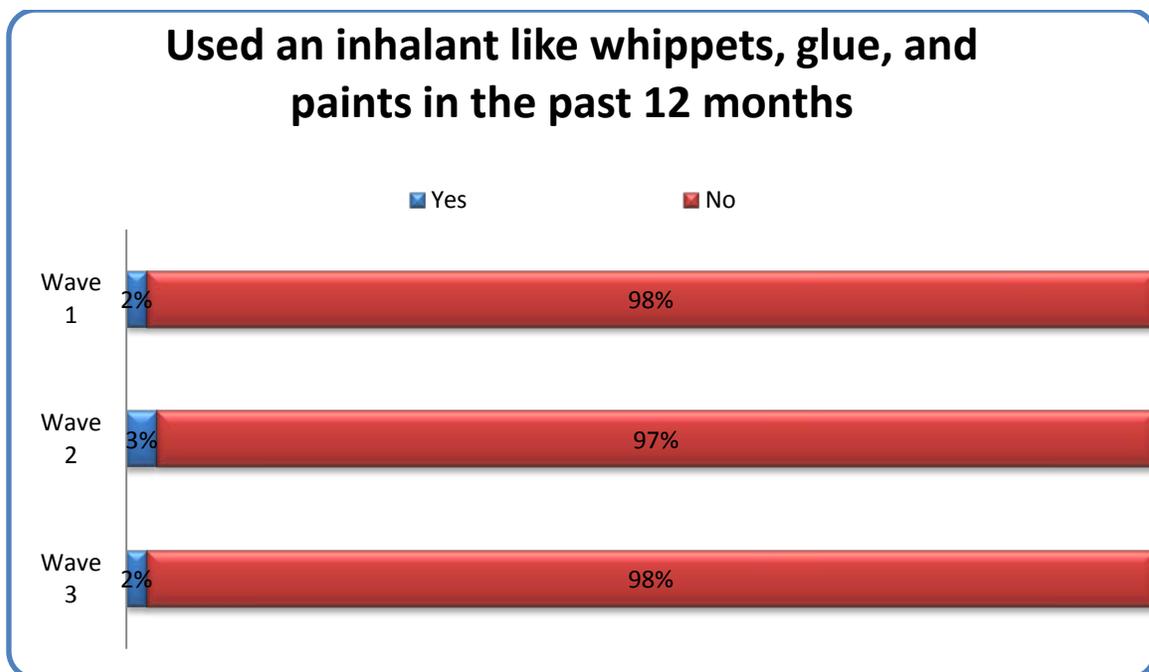


Among youth who reported smoking marijuana in the past 12 months ($N_{\text{Wave1}} = 68$; $N_{\text{Wave2}} = 68$; $N_{\text{Wave3}} = 91$), similar to cigarette use, the majority smoked marijuana less than once a month (49%-63%) (see Figure on page 21).

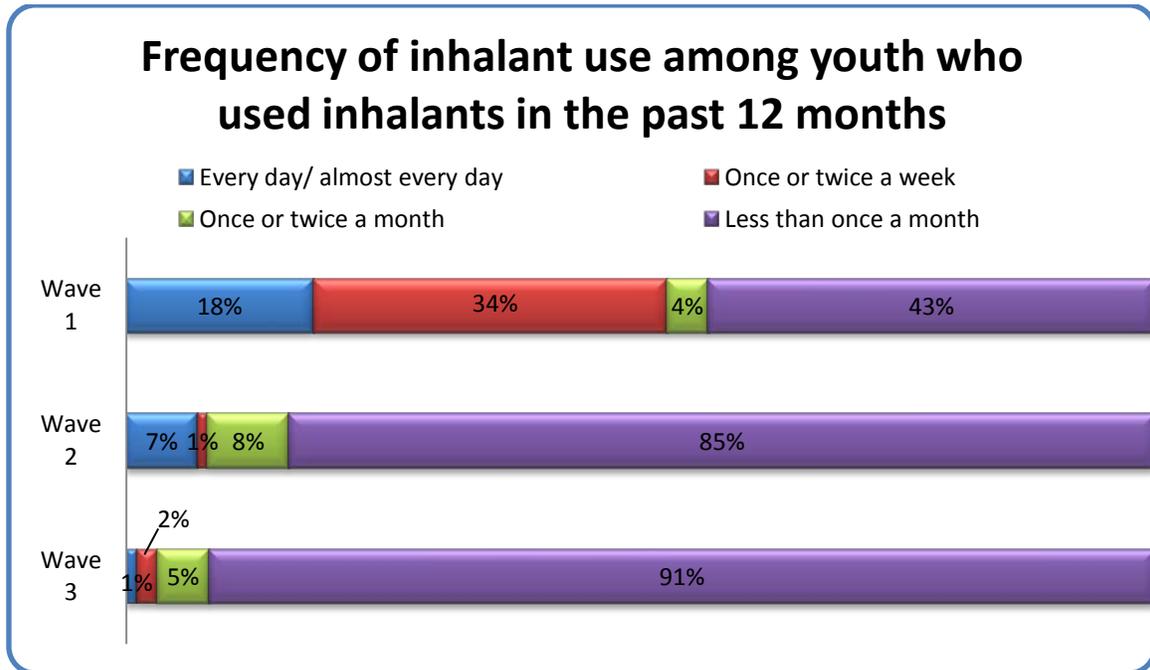
Over time, the percentage of youth who smoked daily increased slightly (from 5% to 8%) and the percentage of youth who smoked less than once a month decreased (from 63% to 49%). Youth were more likely to be more frequent smoking of marijuana compared to cigarettes, suggesting that this substance may be more acceptable for repetitive use than cigarettes within adolescent culture.

Inhalant Use:

Inhalants were uncommonly reported by the cohort.



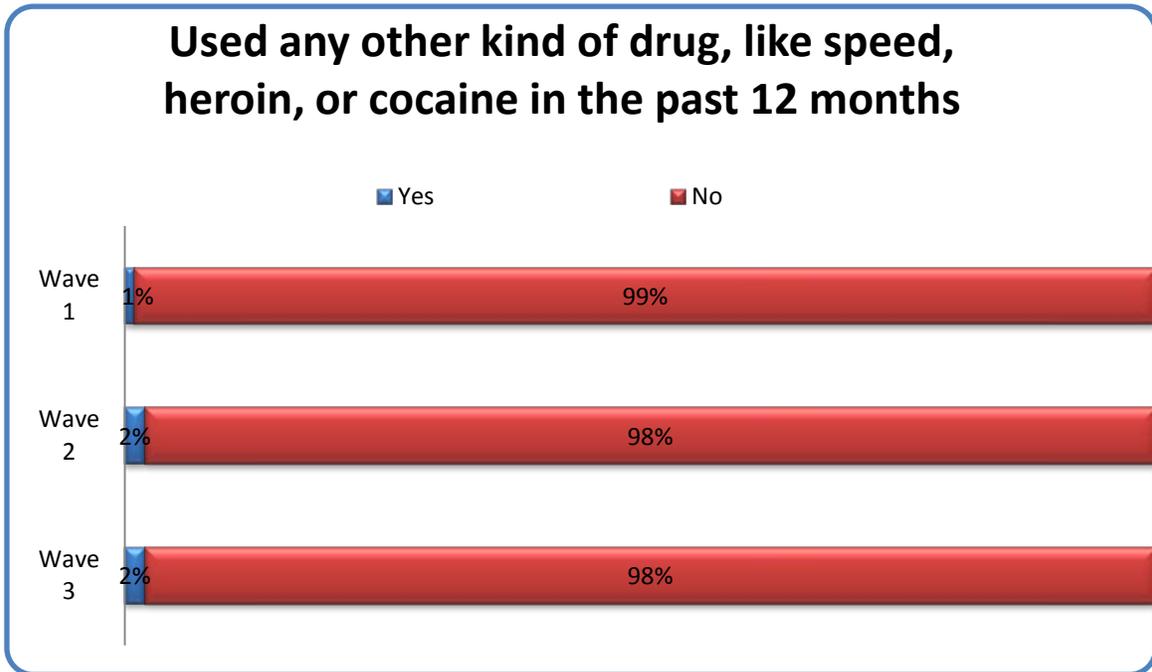
Use of inhalants like whippets, glue, and paints were uncommon in the cohort - especially compared to alcohol, cigarettes, and marijuana. Rates were consistently low over time.



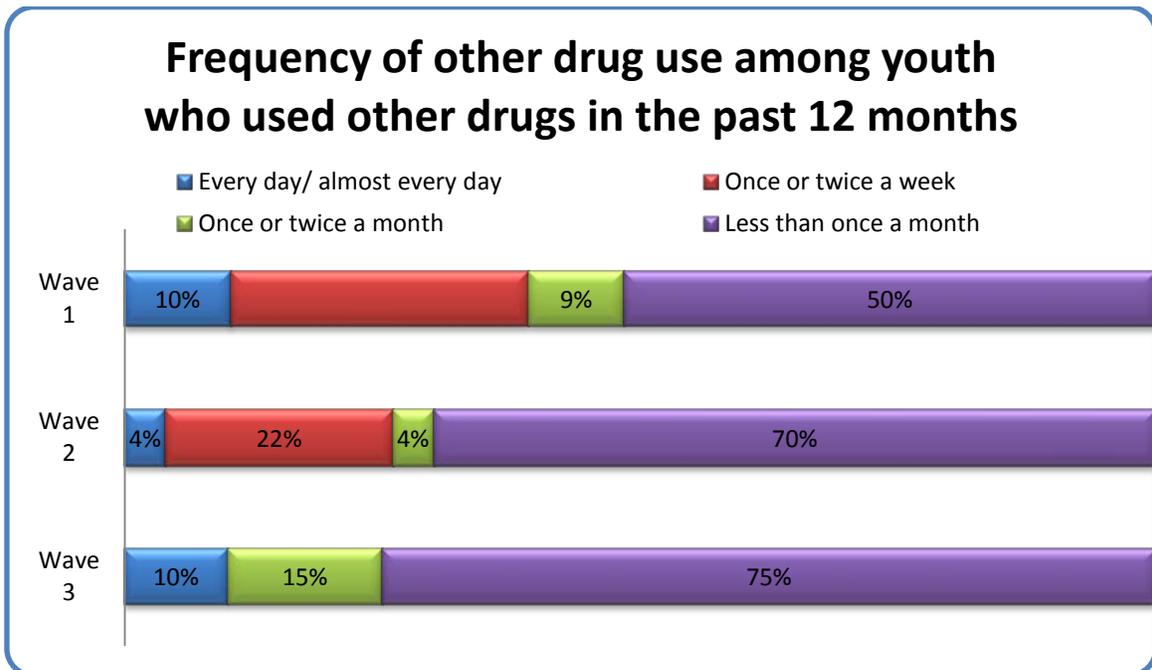
Among youth who reported using inhalants like whippets, glue, and paints in the past 12 month ($N_{Wave1} = 29$; $N_{Wave2} = 33$; $N_{Wave3} = 35$), the vast majority did so less than once a month. There was a notable decline in youth who reported more frequent inhalant use. This shift may be partially explained by the small percentage of youth (1-3% of the entire cohort) who endorsed this behavior, making estimates somewhat unstable.

Use of other drugs:

Use of 'hardcore' drugs like speed, heroin, or cocaine was the least commonly used by youth.



One to 2% of youth reported using any other kind of drug, like speed, heroin, or cocaine in the past 12 months (see Figure above). Similar to inhalant use, use of ‘any other kind of drug’ were consistently low over time.



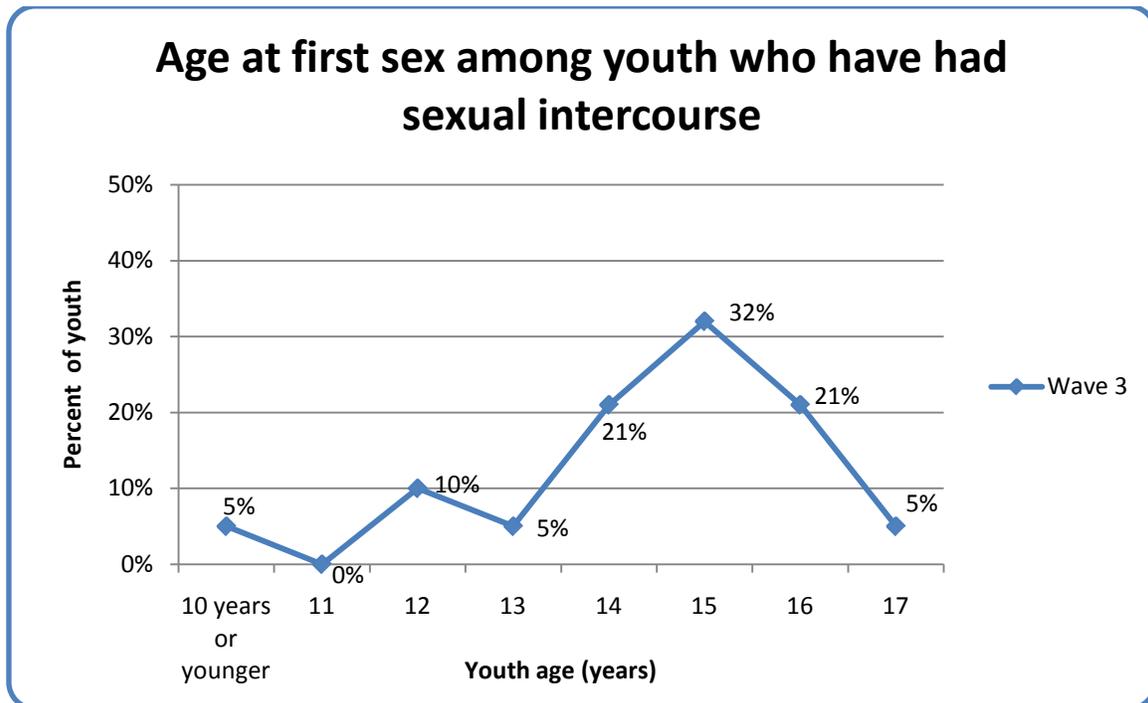
As shown in the Figure above, half of youth at Wave 1 who said they used other drugs like speed, heroin, or cocaine in the past 12 months ($N_{Wave1} = 18$; $N_{Wave2} = 20$; $N_{Wave3} = 25$) used those drugs less than once a month, this increased to 3 of every 4 youth by Wave 3. A mirrored decrease was observed in

the percentage of youth these types of drugs once or twice a week from 28% at Wave 1 to 0% at Wave 3.

SECTION 6: SEXUAL BEHAVIOR

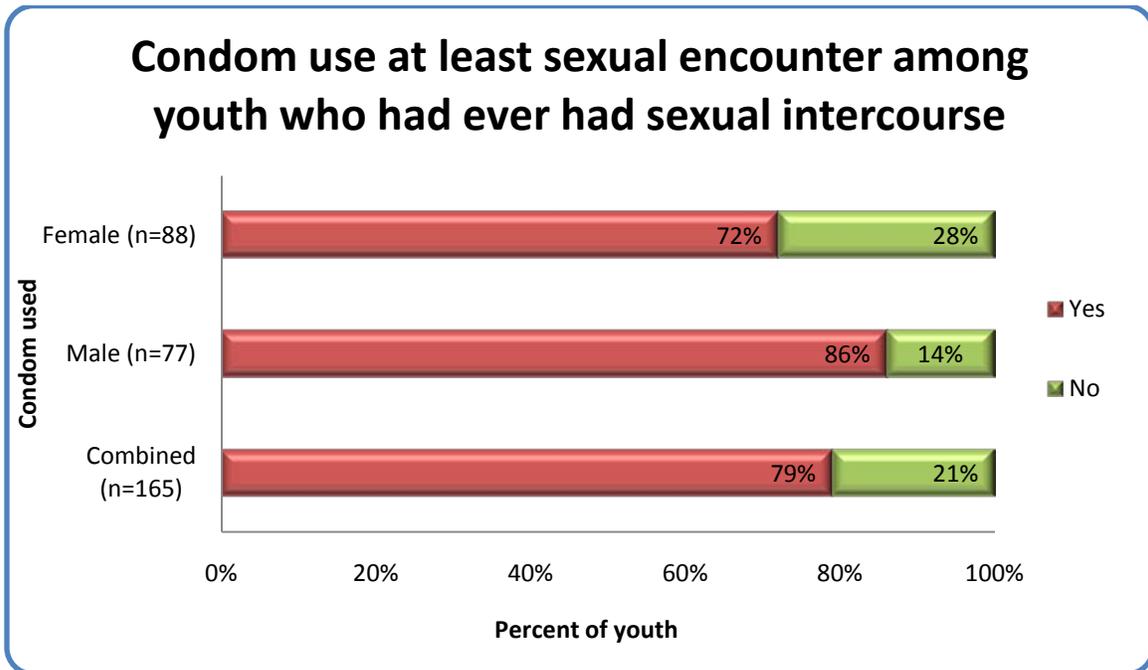
Sexual Behavior:

At Wave 3, a question was added to the survey instrument to query lifetime sexual intercourse experience based upon that included in the YRBS.¹⁰ Sixteen percent of respondents ($N_{\text{Wave3}} = 165$), who were 12-17 years of age at the time, reported ever having had sexual intercourse.



Among youth who have had sexual intercourse, the modal age of first sexual intercourse was 15 years old (32%), followed by 14 years old (21%) and 16 years old (21%); the mean age of first sex was 14 years old (SE = 0.41).

Among youth who have had sexual intercourse, use of a condom at last sexual encounter was common.



Of youth who reported that they had ever sexual intercourse ($N_{\text{Wave3}} = 165$ [male=77; female=88]), nearly 8 of every 10 youth reported using a condom with their partner the last time they had sex. This is reassuring given that condom use is the best way to prevent sexually transmitted infections among sexually active individuals.

On the other hand, 21% of youth did not use a condom they last time they had sex. Furthermore, among these sexually active youth, females were twice as likely as males to report not using a condom the last time they had sexual intercourse. This suggests efforts to empower females both directly as well as indirectly through messaging to males, is needed to increase condom use in this vulnerable population.

CONCLUSION:

This bulletin provides a rare, comprehensive view of the psychosocial functioning of young people as they grow from children into adolescents. Overall, the news is good: most young people report positive relationships with their caregivers and consistent parental monitoring; most have strong social support either from a friend or a special person, or both; most are doing well academically, and actually like school; few are getting suspended or expelled. Depressive symptomatology, propensity to respond to stimuli with anger, and frequent substance use are not common among the adolescents in the Growing up with Media study. All told: most of our young people seem to be healthfully navigating adolescence.

These data make clear too however, that there is a minority of young people who are struggling. We need to do a better job of identifying and reaching out to young people who need help; and in doing so, not stigmatizing them, or vilifying adolescents or adolescence.

As a parenthetical note: Findings also provide insight into social support online and offline. Most youth do not report knowing anyone online that they do not know offline. Furthermore, of those who do have friends online, social support does not seem to be as strong. Thus, although the Internet is a source of new friends, it is more frequently a source of enrichment and reinforcement of existing (offline) relationships.

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This bulletin was prepared jointly by (in alphabetical order): Dr. Josephine Korchmaros, Ms. Tonya Prescott, and Dr. Michele Ybarra.

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Other Bulletins in this Series:

- Methodological Details
- Parent and Youth Media Use Patterns
- Parent and Youth Reported Household Rules Characteristics
- Exposure to Violence and Sex in Media
- Youth Violence Victimization and Perpetration

Selection of Other Publications:

Ybarra, M.L., Diener-West, M., Markow, D., Leaf, P.J., Hamburger, M., & Boxer, P. Linkages between internet and other media violence with seriously violent behavior by youth. *Pediatrics*. 2008;122(5):929-937

Ybarra, M.L., & Mitchell, K.J. How risky are social networking sites? A comparison of places online where youth sexual solicitation and harassment occurs. *Pediatrics*. 2008;121:e350-e357.

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