

Percent Bullied Overall

100
90
80
70
60
50
40
30
20
10
0

aPR (CI) = 1.3 (1.1, 1.4)

54.3

Bullying Frequency

■ Weekly or daily

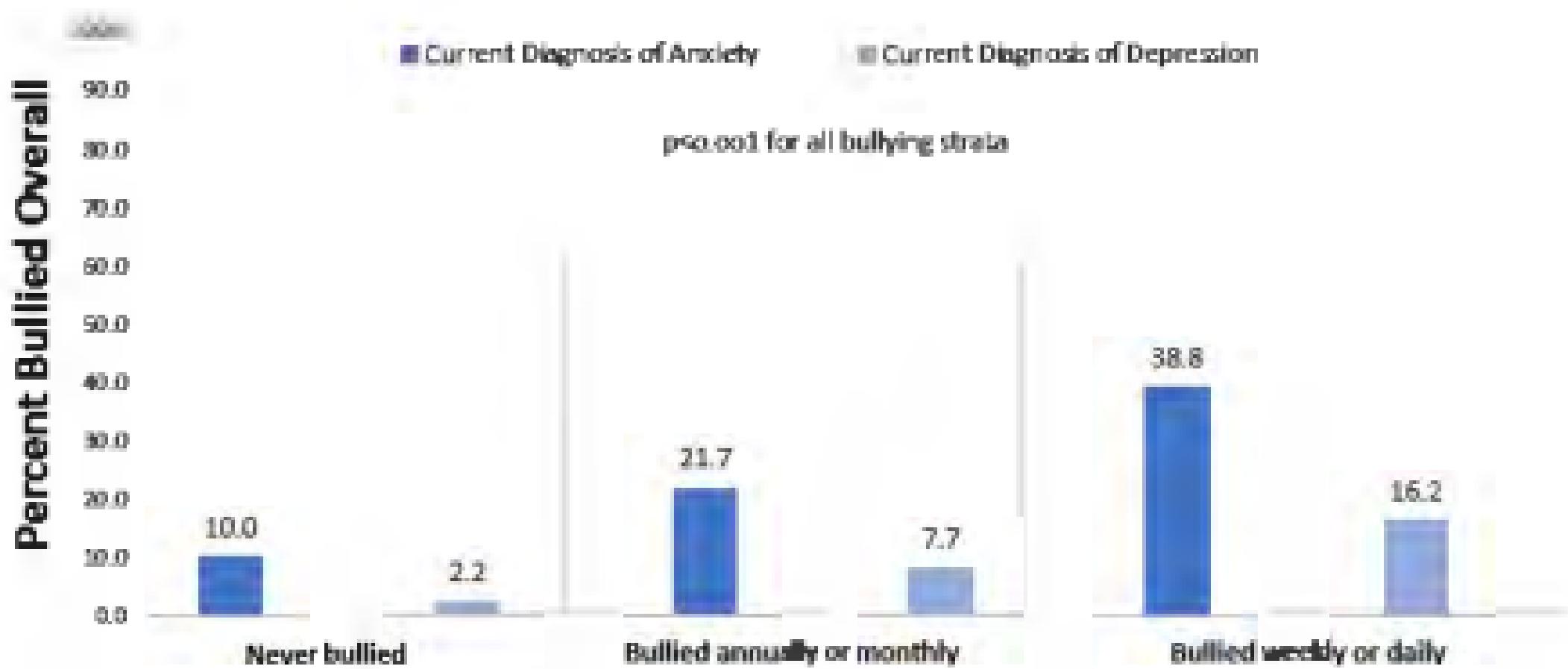
■ Annually or monthly

42.4

Heart Condition

No Heart Condition

aPR: adjusted prevalence ratio of being bullied comparing children with heart conditions to children without heart conditions, adjusted for sex, age group, race and ethnicity, ever told overweight; CI: 95% Confidence Interval



Percent Bullied Overall

■ Current Diagnosis of Anxiety ■ Current Diagnosis of Depression

90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0

$p < 0.05$ for all bullying strata

Never bullied

12.1

4.1

Bullied annually or monthly

25.7

9.5

37.4

15.3

Bullied weekly or daily

Supplementary Table S1. Characteristics of children included and excluded for missing data, by heart condition status, National Survey of Children's Health, United States, 2018-2020

	Heart Condition				Chi-square p-value	No Heart Condition				Chi-square p-value
	Excluded		Included			Excluded	Included			
	N	Weighted %	N	Weighted %		N	Weighted %	N	Weighted %	
Total	60	4.6 (2.8, 7.2)	1843	95.5(92.8, 97.2)		3253	5.9(5.4, 6.3)	67585	94.1(93.7, 94.6)	
Bullied in the past 12 months					0.35					0.22
Weekly or daily	24	58.4(36.7, 77.3)	778	43.7(39.3, 48.2)		1814	59.3(55.5, 63.1)	36509	56.7(55.9, 57.6)	
Annually or monthly	29	28.9(15.1, 48.2)	876	45.1(40.7, 49.5)		1229	34.8(31.2, 38.6)	27517	38.0(37.2, 38.8)	
Never	7	12.6(4.4, 31.4)	189	11.2(8.6, 14.6)		210	5.9(4.7, 7.4)	3559	5.3(5.0, 5.7)	
Sex					0.05					0.19
Male	40	75.7(56.4, 88.3)	1006	53.2(48.7, 57.6)		1700	53.5(49.6, 57.5)	35040	50.8(50.0, 51.7)	
Female	20	24.3(11.7, 43.6)	837	46.8(42.4, 51.3)		1553	46.5(42.6, 50.4)	32545	49.2(48.3, 50.0)	
Age group (years)					0.19					0.51
6-8	7	13.9(4.7, 34.6)	368	25.8(21.6, 30.4)		611	22.4(19.1, 26.1)	13550	24.0(23.3, 24.8)	
9-11	21	48.3(26.1, 71.3)	396	24.3(20.6, 28.5)		761	25.6(22.1, 29.5)	15379	25.5(24.7, 26.2)	
12-14	13	10.8(4.8, 22.8)	467	23.3(20.2, 26.8)		844	24.7(21.8, 27.8)	17416	25.7(25.0, 26.5)	
15-17	19	27.0(13.3, 47.1)	612	26.6(23.1, 30.3)		1037	27.3(23.9, 31.0)	21240	24.8(24.1, 25.5)	
Race and ethnicity ¹					0.07					<0.001
Black, non-Hispanic	11	28.8(13.5, 51.0)	117	12.1(9.5, 15.3)		401	20.5(17.6, 23.6)	4406	13.3(12.7, 13.9)	
Hispanic	6	6.8(2.1, 20.0)	195	20.3(16.0, 25.4)		478	30.3(25.9, 35.0)	8343	25.7(24.8, 26.7)	
Other, non-Hispanic ²	7	30.7(10.2, 63.2)	205	8.2(6.5, 10.2)		422	10.0(8.4, 11.8)	8511	10.6(10.1, 11.0)	
White, non-Hispanic	36	33.8(18.5, 53.4)	1326	59.4(54.7, 64.0)		1952	39.3(35.8, 42.8)	46325	50.4(49.6, 51.3)	
Caregiver marital status					0.03					0.02
Missing	30					1766				

¹ Non-Hispanic Black or African American alone; Hispanic; non-Hispanic other, including Asian, Alaskan Native, American Indian, Native Hawaiian, Pacific Islander, or mixed race; non-Hispanic White alone

CI: Confidence Interval; FPL: Federal Poverty Level

² Other includes respondents identified as Asian, Alaskan Native, American Indian, Native Hawaiian, Pacific Islander, or mixed race

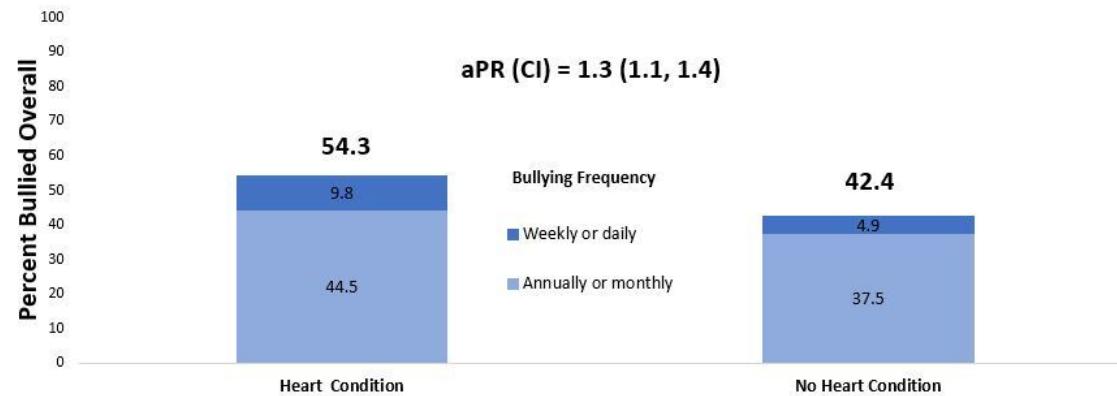
Never married	1	1.4(0.2, 9.6)	114	7.9(5.7, 10.8)		98	5.8(4.2, 8.1)	3444	7.5(7.0, 8.0)	
Divorced, separated, or widowed	11	48.6(26.5, 71.2)	305	16.6(13.4, 20.3)		316	19.9(16.1, 24.4)	9854	15.1(14.5, 15.7)	
Married or not married, living with partner	18	50.0(27.8, 72.2)	1424	75.6(71.4, 79.3)		1073	74.3(69.4, 78.6)	54287	77.5(76.7, 78.2)	
Caregiver educational attainment					0.03					<0.001
High school or less	19	60.4(39.5, 78.1)	282	22.2(18.3, 26.8)		902	42.3(38.3, 46.4)	10768	29.5(28.6, 30.4)	
More than high school	41	39.6(21.9, 60.5)	1561	77.8(73.2, 81.7)		2351	57.7(53.6, 61.7)	56817	70.5(69.6, 71.4)	
Poverty status (% FPL) ³					0.16					<0.001
<100	12	45.1(22.7, 69.7)	248	19.5(15.6, 24.1)		647	27.5(23.9, 31.4)	7663	17.9(17.1, 18.6)	
100-199	18	24.6(11.7, 44.3)	329	20.1(17.0, 23.8)		676	23.9(20.5, 27.7)	11016	21.8(21.1, 22.6)	
200-399	16	15.6(7.4, 30.1)	590	30.8(26.8, 35.0)		871	24.6(21.6, 27.9)	20847	28.8(28.1, 29.5)	
≥400	14	14.7(6.9, 28.8)	676	29.6(26.1, 33.4)		1059	24.0(21.0, 27.3)	28059	31.5(30.8, 32.2)	
Intellectual disability					0.004					0.43
Missing	6					211				
Yes	2	0.7(0.1, 4.0)	141	7.2(5.3, 9.7)		52	1.5(0.9, 2.3)	719	1.2(1.0, 1.4)	
No	52	99.3(96.0, 99.0)	1702	92.8(90.3, 94.7)		2990	98.5(97.7, 99.1)	66866	98.8(98.6, 99.0)	
Down syndrome					0.37					0.94
Missing	5					179				
Yes	3	1.8(0.4, 9.0)	74	3.4(2.4, 4.9)		6	0.1(0.0, 0.3)	71	0.1(0.1, 0.2)	
No	52	98.2(91.0, 99.7)	1769	96.6(95.1, 97.6)		3068	99.9(99.7, 99.9)	67514	99.9(99.8, 99.9)	
Other genetic or inherited condition					0.22					0.29
Missing	4					282				
Yes	8	8.5(3.3, 20.0)	311	14.7(12.0, 17.7)		127	3.3(2.0, 5.4)	3000	4.2(3.9, 4.5)	
No	48	91.5(80.1, 96.7)	1532	85.4(82.3, 88.0)		2844	96.7(94.6, 98.0)	64585	95.8(95.5, 96.1)	
Ever told overweight					0.28					0.06
Missing	4					292				

³ Based on US Department of Health and Human Services poverty guideline

Yes	8	34.1(12.6, 65.0)	255	14.8(12.2, 17.8)		277	8.9(7.2, 10.9)	5830	10.8(10.2, 11.4)	
No	48	65.9(35.0, 87.4)	1588	85.3(82.2, 87.8)		2684	91.1(89.1, 92.8)	61755	89.3(88.6, 89.9)	
Functional limitation ⁴					0.93					0.65
Missing	0					6				
≥1	37	51.0(28.3, 73.3)	924	50.0(45.5, 54.4)		1057	28.9(25.6, 32.4)	18804	28.1(27.3, 28.9)	
None	23	49.0(26.7, 71.7)	919	50.0(45.6, 54.5)		2190	71.1(67.6, 74.4)	48781	71.9(71.1, 72.7)	

⁴ Adapted from National Survey of Children's Health 12 functional difficulties indicator. Functional limitations are defined as having one or more of the following: serious difficulty concentrating, remembering, or making decisions because of a physical, mental, or emotional condition; serious difficulty walking or climbing stairs; difficulty dressing or bathing; difficulty doing errands alone, such as visiting a doctor's office or shopping; deafness or problems with hearing; blindness or problems with seeing, even when wearing glasses.

Supplementary Figure S1. Prevalence of being bullied among children with and without heart conditions, ages 6-17 years, excluding those with Down syndrome or other genetic or inherited conditions, National Survey of Children's Health, United States, 2018-2020



aPR: adjusted prevalence ratio of being bullied comparing children with heart conditions to children without heart conditions, adjusted for sex, age group, race and ethnicity, ever told overweight; CI: 95% Confidence Interval

Supplementary Table S2. Associations between heart condition status and being bullied among children ages 6-17 years, National Survey of Children's Health, 2018-2020 and 2018-2019

Heart Condition	Bullied in the past 12 months					
	2018-2020			2018-2019		
	N	Weighted % (95% CI)	aPR (95% CI)	N	Weighted % (95% CI)	aPR (95% CI)
Yes	1065	56.3(51.8, 60.7)	1.3(1.2, 1.4)	661	60.8(55.7, 65.7)	1.3(1.1, 1.4)
No	31076	43.3(42.5, 44.1)	REF	20132	47.4(46.4, 48.5)	REF

CI: Confidence Interval; aPR: adjusted prevalence ratio of being bullied comparing children with heart conditions to children without heart conditions from 2018-2020 and 2018-2019, adjusted for sex, age group, race and ethnicity, ever told overweight.

Supplementary Table S3. Associations between heart condition status and frequency of being bullied among children ages 6-17 years, National Survey of Children's Health, 2018-2020 and 2018-2019

		Bullied annually or monthly				
		2018-2020		2018-2019		
Heart Condition	N	Weighted % (95% CI)	aPR (95% CI)	N	Weighted % (95% CI)	aPR (95% CI)
Yes	876	50.8(46.1, 55.4)	1.2(1.1, 1.4)	546	55.4(50.0, 60.7)	1.2(1.1, 1.4)
No	27517	40.1(39.3, 40.9)	REF	17834	44.1(43.0, 45.2)	REF
Bullied weekly or daily						
		2018-2020		2018-2019		
Heart Condition	N	Weighted % (95% CI)	aPR (95% CI)	N	Weighted % (95% CI)	aPR (95% CI)
Yes	189	20.5(15.8, 26.1)	2.2(1.7, 2.9)	115	23.5(17.2, 31.3)	2.1(1.5, 2.9)
No	3559	8.6(8.0, 9.2)	REF	2298	10.2(9.4, 11.1)	REF

CI: Confidence Interval; aPR: adjusted prevalence ratio of being bullied annually or monthly versus never and weekly or daily versus never comparing children with heart conditions to children without heart conditions from 2018-2020 and 2018-2019, adjusted for sex, age group, race and ethnicity, ever told overweight.

Supplementary Table S4. Associations between demographic characteristics and frequency of being bullied among children with heart conditions ages 6-17 years, excluding those with Down syndrome or other genetic or inherited conditions, National Survey of Children's Health, United States, 2018-2020

	Bullied in the past 12 months							
	Never		Annually or monthly			Weekly or daily		
	N	Weighted % (95% CI)	N	Weighted % (95% CI)	aPR (95% CI)	N	Weighted % (95% CI)	aPR (95% CI)
Total	651	45.7(40.7, 50.7)	702	44.5(39.6, 49.4)		124	9.8(7.1, 13.4)	
Sex								
Male	377	47.6(41.2, 54.1)	366	44.8(38.3, 51.6)	1.0(0.8, 1.2)	64	7.6(5.3, 10.8)	0.7(0.4, 1.0)
Female	274	43.5(35.8, 51.5)	336	44.1(37.0, 51.4)	REF	60	12.4(7.6, 19.5)	REF
Age group (years)								
6-8	122	48.8(37.2, 60.6)	146	44.0(33.3, 55.3)	1.2(0.9, 1.7)	25	7.2(3.8, 13.3)	2.3(1.2, 4.6)
9-11	107	32.1(23.4, 42.4)	181	50.6(40.2, 61.0)	1.6(1.2, 2.1)	34	17.2(10.3, 27.3)	5.4(3.0, 9.6)
12-14	151	40.1(31.9, 48.8)	194	48.2(39.6, 56.9)	1.4(1.1, 1.9)	28	11.8(5.9, 22.2)	3.2(1.5, 6.8)
15-17	271	60.0(51.4, 68.0)	181	36.2(28.3, 45.0)	REF	37	3.8(2.4, 5.9)	REF
Race and ethnicity ¹								
Black, non-Hispanic	53	59.5(46.4, 71.3)	42	33.5(22.5, 46.5)	0.7(0.5, 1.0)	8	7.0(2.9, 15.9)	0.6(0.3, 1.3)
Hispanic	82	51.3(36.1, 66.2)	63	41.6(27.9, 56.8)	0.9(0.6, 1.3)	9	7.1(2.6, 18.0)	0.6(0.3, 1.3)
Other, non-Hispanic ²	70	36.2(25.6, 48.4)	71	47.8(35.1, 60.7)	1.1(0.8, 1.4)	16	16.0(7.7, 30.2)	1.4(0.7, 2.8)
White, non-Hispanic	446	42.1(36.7, 47.6)	526	47.4(41.9, 53.0)	REF	91	10.5(7.0, 15.6)	REF
Caregiver marital status								
Never married	36	37.5(22.7, 55.1)	44	36.8(22.1, 54.4)	1.0(0.7, 1.5)	11	25.7(10.1, 51.5)	2.1(1.0, 4.4)
Divorced, separated, widowed	96	46.2(33.2, 59.8)	119	46.3(32.7, 60.4)	1.0(0.8, 1.4)	20	7.5(4.3, 12.8)	0.9(0.5, 1.8)
Married, not married living with a partner	519	46.5(40.9, 52.1)	539	45.0(39.6, 50.4)	REF	93	8.6(6.0, 12.0)	REF
Caregiver educational attainment								
High school or less	107	49.6(36.5, 62.8)	88	35.7(25.0, 48.1)	0.9(0.6, 1.2)	22	14.7(7.6, 26.7)	1.5(0.8, 2.7)
More than high school	544	44.6(39.5, 49.8)	614	47.0(41.8, 52.1)	REF	102	8.5(5.9, 12.0)	REF

¹ Non-Hispanic Black or African American alone; Hispanic; non-Hispanic other, including Asian, Alaskan Native, American Indian, Native Hawaiian, Pacific Islander, or mixed race; non-Hispanic White alone

CI: Confidence Interval; aPR: adjusted prevalence ratio comparing being bullied annually or monthly versus never and being bullied weekly or daily versus never.

Adjusted for sex, age group, race and ethnicity, ever told overweight; FPL: Federal Poverty Level

² Other includes respondents identified as Asian, Alaskan Native, American Indian, Native Hawaiian, Pacific Islander, or mixed race

Poverty status (% FPL) ³								
<100	87	51.4(37.1, 65.5)	84	34.2(23.0, 47.4)	0.8(0.6, 1.2)	25	14.4(6.6, 28.6)	1.6(0.7, 3.7)
100-199	112	50.2(40.0, 60.4)	110	39.0(29.7, 49.1)	0.9(0.7, 1.2)	24	10.8(6.2, 18.1)	1.3(0.6, 2.6)
200-399	204	41.4(33.1, 50.1)	225	49.9(40.8, 59.0)	1.1(0.9, 1.3)	32	8.8(4.6, 16.0)	1.3(0.6, 2.7)
≥400	248	43.5(36.4, 50.9)	283	49.2(42.0, 56.3)	REF	43	7.3(4.5, 11.7)	REF
Intellectual disability								
Yes	11	46.7(18.2, 77.5)	17	47.1(17.3, 79.1)	1.0(0.4, 2.7)	6	6.2(1.9, 18.3)	0.3(0.1, 1.8)
No	640	45.7(40.7, 50.8)	685	44.4(39.5, 49.4)	REF	118	9.9(7.1, 13.6)	REF
Ever told overweight								
Yes	66	36.1(26.2, 47.3)	91	43.5(32.7, 55.0)	1.2(0.9, 1.5)	27	20.4(11.4, 33.7)	2.5(1.5, 4.2)
No	585	47.2(41.7, 52.7)	611	44.6(39.3, 50.1)	REF	97	8.1(5.6, 11.8)	REF
Functional limitation ⁴								
≥1	218	34.4(28.2, 41.2)	324	48.5(41.6, 55.4)	1.4(1.2, 1.7)	89	17.1(12.0, 23.9)	4.3(2.4, 7.8)
None	433	54.4(47.5, 61.2)	378	41.4(34.8, 48.3)	REF	35	4.1(2.1, 7.9)	REF

³ Based on US Department of Health and Human Services poverty guideline

⁴ Adapted from National Survey of Children's Health 12 functional difficulties indicator. Functional limitations are defined as having one or more of the following: serious difficulty concentrating, remembering, or making decisions because of a physical, mental, or emotional condition; serious difficulty walking or climbing stairs; difficulty dressing or bathing; difficulty doing errands alone, such as visiting a doctor's office or shopping; deafness or problems with hearing; blindness or problems with seeing, even when wearing glasses.

Supplementary Figure S2. Having a current diagnosis of anxiety or depression among children with heart conditions ages 6-17 years, by bullying status, excluding those with Down syndrome or other genetic or inherited conditions, National Survey of Children's Health, United States, 2018-2020

