Prevalence and Treatment of Depression, Anxiety, and Conduct Problems in US Children

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Objectives To use the latest data to estimate the prevalence and correlates of currently diagnosed depression, anxiety problems, and behavioral or conduct problems among children, and the receipt of related mental health treatment.

Study design We analyzed data from the 2016 National Survey of Children's Health (NSCH) to report nationally representative prevalence estimates of each condition among children aged 3-17 years and receipt of treatment by a mental health professional. Parents/caregivers reported whether their children had ever been diagnosed with each of the 3 conditions and whether they currently have the condition. Bivariate analyses were used to examine the prevalence of conditions and treatment according to sociodemographic and health-related characteristics. The independent associations of these characteristics with both the current disorder and utilization of treatment were assessed using multivariable logistic regression.

Results Among children aged 3-17 years, 7.1% had current anxiety problems, 7.4% had a current behavioral/conduct problem, and 3.2% had current depression. The prevalence of each disorder was higher with older age and poorer child health or parent/caregiver mental/emotional health; condition-specific variations were observed in the association between other characteristics and the likelihood of disorder. Nearly 80% of those with depression received treatment in the previous year, compared with 59.3% of those with anxiety problems and 53.5% of those with behavioral/conduct problems. Model-adjusted effects indicated that condition severity and presence of a comorbid mental disorder were associated with treatment receipt.

Conclusions The latest nationally representative data from the NSCH show that depression, anxiety, and behavioral/conduct problems are prevalent among US children and adolescents. Treatment gaps remain, particularly for anxiety and behavioral/conduct problems. *(J Pediatr 2019;206:256-67).*

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Childhood mental disorders are a public health concern due to their prevalence, early onset, and impact on children, families, and communities.[1,2] Mental disorders in childhood can negatively affect healthy development by interfering with children's ability to achieve social, emotional, cognitive, and academic milestones and to function in daily settings. In addition, mental disorders account for the largest area of aggregate medical spending ($8.9 billion) among all health disorders that contribute to overall child health expenses.[3] Despite evidence of high expenses related to medical care, mental health treatment utilization among children is relatively low, with a significant portion of children receiving no mental health treatment even though they may have a mental disorder.[4,5]

Existing national surveys indicate that between 13% and 20% of children in the US have a mental, emotional, or behavioral disorder each year, although most of these surveys have focused on adolescents (age 12-17 years) or did not assess multiple diagnoses.[2] Trends across time in these data suggest that although the prevalence of some childhood mental disorders has remained relatively stable, that of several disorders (eg, depression among adolescents) has increased.[6] The prevalence of specific childhood mental disorders has implications for service planning, resource allocation, and prevention and treatment programming. According to a nationally representative survey of adolescents

aPR	Adjusted prevalence ratio
FPL	Federal poverty level
NSCH	National Survey of Children's Health
PR	Prevalence ratio

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(age 13-18 years) in the US, the most common mental disorders by lifetime prevalence are anxiety (31.9%), behavior (19.1%), and mood (14.3%).[7]

The purpose of the present study was to use the latest data from the 2016 National Survey of Children's Health (NSCH) to report nationally representative prevalence estimates of current depression, anxiety problems, and behavioral or conduct problems among children aged 3-17 years in the US and the receipt of past-year mental health treatment among those with each condition. In addition to providing the most recent estimates of childhood mental disorders, this study covers a wider range of ages than most national surveys. Although diagnoses of mental health conditions in very young children may be relatively rare, previous research on mental health treatment[8,9] has included preschool-aged children because the diagnosis and treatment of these 3 conditions in infants and toddlers is particularly complex. For example, Ali et al found that preschoolers, especially those without a diagnosis, often receive medication treatment without accompanying psychosocial intervention.[8] The study examined the sociodemographic and health factors associated with each of these conditions and related treatment, and provides a foundation for future studies using the recently redesigned NSCH.

Methods

We conducted secondary analyses of the 2016 NSCH, an address-based, self-administered survey funded and directed by the Health Resources and Services Administration's Maternal and Child Health Bureau and conducted by the US Census Bureau. The multistage survey is designed to produce both national- and state-level estimates for key indicators of the physical and emotional health of US children aged 0-17 years and related family and community factors. Between July 2016 and February 2017, the 2016 NSCH sampled approximately 365 000 household addresses, resulting in 50 212 questionnaires completed via web and paper among households with children. The proportion of households known to include children that completed the topical questionnaire was 69.7%. The overall weighted response rate, which includes nonresponse to the screener to identify whether households include children, was 40.7%. An adult (parent/caregiver) who was familiar with the child's health and health care served as the respondent; 1 child was selected at random to be the subject of the topical questionnaire in households with multiple children. Questionnaires were available in English and Spanish. The design and operation of the survey have been described in detail elsewhere.[10-12]

Measures

The presence of current mental disorders was assessed in all children using parent/caregiver responses to questions regarding whether a doctor or healthcare provider had ever told the parent/caregiver that the child had depression, anxiety problems, or behavioral or conduct problems (yes/no) and if so, whether the child currently had the condition. For behavioral/conduct problems, the question also included whether educators such as teachers or school nurses had told the parent/caregiver that the child had the disorder. If the condition was current, parents/caregivers rated the severity of the condition (mild/moderate/severe). Parents/caregivers also reported whether the child had received any treatment or counseling from a mental health professional (including psychiatrists, psychologists, psychiatric nurses, and clinical social workers) in the previous 12 months (yes/no).

Covariates. We considered 12 sociodemographic and health-related characteristics as covariates that were identified a priori from the literature as being associated with mental disorders and receipt of treatment.[7,13] These included 6 child-level factors: sex, age, race/ethnicity, insurance status and type (private only, public only, combined public and private, unspecified, and uninsured), respondent-reported physical health status (excellent/very good, good, fair/poor), and presence of current comorbid mental health problems. Six household-level factors were also included: poverty level (<100% federal poverty level [FPL], 100%-199% FPL, 200%-399% FPL, and ≥400% FPL), family structure (2 married parents, 2 unmarried parents, single mother, other), household educational attainment (highest level of education attained by either parent/primary caregiver: less than high school, high school/GED/vocational training, college degree or higher), respondent mental or emotional health status (excellent/very good, good, fair/poor), geographic region (Northeast, Midwest, South, West) and urban/rural location (not in Core-Based Statistical Area, Micropolitan, Metropolitan, and Metropolitan Principal City).

Statistical Analyses

For this study, analyses were limited to 43 283 children aged 3-17 years (**Figure**; available at www.jpeds.com). Bivariate and multivariable analyses were conducted to assess the associations between the selected sociodemographic and health-related characteristics and current depression, anxiety problems, and behavioral/conduct problems, as well as receipt of mental health treatment or counseling among those with each of the aforementioned disorders. Next, independent associations between selected covariates and both the presence of current disorders and receipt of treatment were identified; separate multivariable logistic regression models were used to estimate predicted odds, which were converted to marginal probabilities for presentation as the adjusted prevalence ratios (aPRs)[14] of having each of the 3 disorders and of receiving treatment given the presence of 1 of these conditions.

Children with missing data on the outcomes of interest (disorder or receipt of treatment) were excluded. The respective sample sizes for children with valid data for depression, anxiety problems, and behavioral/conduct problems, as well as treatment, are presented in the **Figure**. Child sex, race, and ethnicity were each missing <1% of observations and were imputed by the Census Bureau using hotdeck methods during the weighting process, and the household income-to-poverty ratio (missing 18.6% of observations) was multiply imputed using regression methods. All data were obtained from the public use data file with the exception of data for urban/rural location,

which were available only from confidential restricted-access files at the Census Bureau. Analyses were conducted using SAS-callable SUDAAN version 11.0.1 (Research Triangle Institute, Research Triangle Park, North Carolina) to adjust for the multistage sample design. Survey weights supplied by the Census Bureau were applied to account for noncoverage and nonresponse and reflect the US population of all noninstitutionalized children aged 0-17 years.

Results

Prevalence estimates for each disorder, overall and by sociodemographic and health-related characteristics, are presented in **Table I**. In 2016, 3.2% of US children and adolescents (approximately 1.9 million) had current depression, 7.1% (approximately 4.4 million) had a current anxiety problem, and 7.4% (approximately 4.5 million) had a current behavioral/conduct problem. Differences in the severity and presence of comorbid disorders were observed across conditions. Among children and adolescents with current depression, 9.7% were rated by parents/caregivers has being severely affected by their condition and approximately 45% were rated as being mildly or moderately affected, respectively. Approximately 8% of children with a current anxiety problem were rated as severely affected, compared with approximately 45% who were rated mildly or moderately affected. Finally, nearly 13% of children with diagnosed behavioral/conduct problems were rated as severely affected, 40% were rated as mildly affected, and 48% were rated as moderately affected. The presence of a comorbid mental disorder was most commonly reported among those with current depression, with nearly three-quarters also reporting a current anxiety problem.

The prevalence of each disorder varied by sociodemographic and health-related factors (χ^2 test results not shown; data available on request). For example, prevalence varied by sex only for behavioral/conduct problems, for which the prevalence in boys was more than twice that in girls. Estimates also varied by age, with the prevalence of behavioral/conduct problems peaking in middle childhood (age 6-11 years), whereas depression and anxiety problems were most common among adolescents (age 12-17 years). Anxiety problems were most common among non-Hispanic white children compared with children of other racial/ethnic backgrounds, and behavior/conduct problems were most common among non-Hispanic black children. The prevalence of both depression and behavioral/conduct problems was higher among children living in poor (<100% FPL) households compared with those living in households at ≥200% FPL. The prevalence of all 3 disorders was generally highest among children with public insurance only or some combination of public and private insurance compared with children with private insurance only, with combined public and private insurance, or without insurance. Finally, children in less than excellent or very good physical health and those living with a primary caregiver in fair or poor mental/emotional health had the highest prevalence of any of these disorders compared with children in fair or poor physical health and those living with a caregiver with good, very good, or excellent mental/emotional health. Approximately 30% of children with fair or poor physical health had an anxiety problem or a behavioral/conduct problem, and 18% had depression. Among children with a primary caregiver with fair or poor self-rated mental or emotional health, the prevalence of depression was 13% and the prevalence of anxiety or behavioral/conduct problems was 22%.

Unadjusted PRs and adjusted PRs (aPRs) for the 3 disorders are presented in **Table II**. Unadjusted PRs provide a complementary illustration of the associations and patterns presented in **Table I**. After adjustment, the strength of some of these associations was attenuated, and additional associations were observed for race/ethnicity, poverty, and insurance. Compared with non-Hispanic white children, Hispanic children were less likely to have any of the 3 mental disorders, whereas non-Hispanic black children were less likely to have depression and anxiety and were no longer more likely to have behavior/conduct problems. For anxiety and behavioral/conduct problems, children living in poor households (<100% FPL) were less likely than those in the more advantaged households to have these disorders; in addition, children in near-poor households (100%-199% of FPL) were less likely to have behavioral/conduct problems. Compared with privately insured children, those with public insurance—either alone or in combination with some form of private coverage—were more likely to have these mental disorders. This was particularly true for behavioral or conduct problems, which were 2-3 times more commonly diagnosed in children with some form of public coverage compared with those with private insurance.

Table III details the receipt of past-year treatment or counseling by a mental health professional among children with each of the 3 disorders. Overall, treatment receipt was more common among children with depression (78.1%), whereas the receipt of treatment for anxiety and behavioral/conduct problems was 59.3% and 53.5%, respectively. The receipt of treatment varied by selected sociodemographic and health-related characteristics among children with each disorder (χ^2 test results available on request). For both anxiety problems and behavioral/conduct problems, treatment receipt was more common among school-aged children compared with those aged 3-5 years, and among those living in the wealthiest households (≥400% FPL) compared with those living in poverty (<100% FPL). No other statistically significant differences by poverty or insurance status or type were observed. For anxiety and behavioral/conduct problems, receipt of treatment was more likely among children with greater condition severity.

The independent associations between the selected sociodemographic and health-related characteristics and past-year mental health treatment among children with each of the 3 disorders are presented in **Table IV**. In general, demographic factors were not significantly associated with the likelihood of receiving treatment with the exception of age; among children with anxiety, those aged 3-5 years were less likely than adolescents to have received treatment. Compared with children living in higher-income households (≥400% FPL), poor children (<100% FPL) were less likely to have received treatment across all 3 disorders, as were near-poor children

Table I. Prevalence of currently diagnosed depression, anxiety, and behavioral/conduct problems among children aged 3-17 years, by sociodemographic and health characteristics, NSCH 2016

	Currently diagnosed with depression				Currently diagnosed with anxiety				Currently diagnosed with behavioral or conduct problems			
Characteristics	Unweighted, n	Weighted, N	Weighted, %	95% CI	Unweighted, n	Weighted, N	Weighted, %	95% CI	Unweighted, n	Weighted, N	Weighted, %	95% CI
All children (3-17 y)		1 934 000	3.2	2.9-3.5		4 355 000	7.1	6.6-7.6		4 509 000	7.4	6.9-7.9
Severity of diagnosed condition												
Mild	806	885 000	46.3	41.4-51.2	1796	1 949 000	45.2	41.5-48.9	1342	1 748 000	39.5	36.1-42.9
Moderate	716	841 000	44.0	39.1-49.0	1634	2 037 000	47.2	43.4-51.1	1445	2 110 000	47.6	44.1-51.2
Severe	135	185 000	9.7	6.6-14.0	308	326 000	7.6	6.2-9.2	335	572 000	12.9	10.6-15.7
Current depression		N/A			1280	1 402 000	32.3	29.1-35.8	673	908 000	20.3	17.7-23.2
Current anxiety	1280	1 402 000	73.8	69.4-77.8		N/A			1308	1 630 000	36.6	33.2-40.1
Current behavioral or conduct problems	673	908 000	47.2	42.3-52.2	1308	1 630 000	37.9	34.3-41.6		N/A		
Sociodemographic characteristics												
Sex												
Male	715	932 000	3.0	0.2-2.6	1783	2 164 000	6.9	6.2-7.7	2205	3 155 000	10.1	9.3-10.9
Female	957	1 002 000	3.3	0.2-2.9	1980	2 191 000	7.3	6.6-8.1	968	1 354 000	4.5	4.0-5.1
Age, y												
3-5	7	9000	*0.08	0.0-0.2	113	153 000	1.3	0.9-1.7	288	410 000	3.4	2.8-4.2
6-11	271	421 000	1.7	1.3-2.2	1115	1 624 000	6.6	5.7-7.6	1390	2 259 000	9.1	8.3-10.1
12-17	1394	1 504 000	6.1	5.5-6.8	2535	2 578 000	10.5	9.7-11.3	1495	1 840 000	7.5	6.7-8.3
Race/ethnicity												
Hispanic	184	330 000	2.2	1.6-2.9	375	915 000	6.0	4.8-7.5	364	837 000	5.5	4.5-6.7
Non-Hispanic white	1198	1 088 000	3.4	3.1-3.8	2908	2 713 000	8.6	8.0-9.2	2158	2 394 000	7.6	7.0-8.2
Non-Hispanic black	110	331 000	4.2	3.1-5.6	136	358 000	4.5	3.4-5.9	287	848 000	10.7	9.1-12.7
Non-Hispanic multiracial/other	180	184 000	2.9	2.3-3.6	344	368 000	5.7	4.4-7.5	364	430 000	6.7	5.3-8.5
Family structure												
Two parents, married	899	904 000	2.3	2.0-2.7	2385	2 504 000	6.4	5.8-7.0	1753	1 986 000	5.1	4.6-5.6
Two parents, unmarried	130	172 000	3.5	2.3-5.2	249	404 000	8.1	5.9-11.1	253	508 000	10.2	7.7-13.4
Single mother	404	585 000	5.9	5.0-7.0	736	946 000	9.6	8.4-11.0	674	1 177 000	12.0	10.6-13.6
Other	218	254 000	4.5	3.6-5.6	340	430 000	7.6	6.3-9.3	422	715 000	12.7	10.7-15.0
Household educational attainment												
Less than high school	53	262 000	4.6	3.0-7.0	83	419 000	7.3	5.3-10.1	111	499 000	8.7	6.5-11.6
High school, GED, or vocational training	266	422 000	3.6	2.9-4.4	467	810 000	6.9	5.7-8.3	524	988 000	8.4	7.2-9.7
More than high school	1317	1 191 000	2.9	2.6-3.2	3139	3 013 000	7.2	6.7-7.8	2438	2 840 000	6.8	6.3-7.4
Household poverty												
<100% FPL	273	625 000	4.8	3.8-6.0	463	984 000	7.6	6.3-9.0	557	1 405 000	10.8	9.4-12.4
100%-199% FPL	334	420 000	3.1	2.4-3.9	659	1 010 000	7.4	6.1-9.0	650	1 024 000	7.5	6.4-8.8
200%-399% FPL	500	453 000	2.8	2.2-3.4	1136	1 124 000	6.8	5.9-7.9	923	1 066 000	6.5	5.6-7.5
≥400% FPL	565	436 000	2.4	2.0-2.8	1505	1 237 000	6.8	6.1-7.6	1043	1 014 000	5.6	5.0-6.3

(*continued*)

Table I. Continued

Characteristics	Currently diagnosed with depression				Currently diagnosed with anxiety				Currently diagnosed with behavioral or conduct problems			
	Unweighted, n	Weighted, N	Weighted, %	95% CI	Unweighted, n	Weighted, N	Weighted, %	95% CI	Unweighted, n	Weighted, N	Weighted, %	95% CI
Insurance status												
Public only	552	911 000	4.8	4.1-5.6	951	1 712 000	9.0	7.8-10.4	1132	2 170 000	11.5	10.3-12.8
Private only	905	735 000	2.1	1.9-2.4	2390	2 085 000	6.1	5.6-6.5	1598	1 608 000	4.7	4.3-5.1
Private and public	126	148 000	5.5	3.8-8.0	272	360 000	13.5	10.3-17.5	309	471 000	17.7	13.8-22.3
Insurance type unspecified†	17	17 000	*1.61	0.8-3.2	37	43 000	4.0	2.5-6.5	27	75 000	7.1	4.1-12.1
Not insured	62	99 000	2.6	1.7-4.1	99	130 000	3.5	2.4-5.0	89	144 000	3.8	2.8-5.3
Region												
Northeast	303	280 000	2.9	2.3-3.6	867	755 000	7.7	6.8-8.8	574	675 000	6.9	5.9-8.1
Midwest	472	517 000	4.0	3.4-4.6	976	1 030 000	7.9	7.1-8.8	804	1 036 000	8.0	7.2-8.9
South	469	738 000	3.1	2.6-3.7	1020	1 560 000	6.6	5.9-7.5	1015	1 902 000	8.1	7.3-9.0
West	428	400 000	2.7	2.1-3.4	900	1 009 000	6.7	5.5-8.2	780	895 000	6.0	4.9-7.2
Rural/urban location‡												
Not in CBSA	144	94 000	3.6	2.7-4.8	278	185 000	7.0	5.7-8.7	251	218 000	8.3	6.8-10.2
Micropolitan Statistical Area	217	198 000	4.1	3.2-5.3	449	354 000	7.5	6.3-8.8	421	444 000	9.3	7.9-10.9
Metropolitan Statistical Area	862	956 000	2.8	2.4-3.1	2096	2 501 000	7.2	6.6-7.9	1644	2 377 000	6.9	6.3-7.6
Metropolitan Principal City	449	687 000	3.6	2.9-4.3	940	1 315 000	6.8	5.8-7.9	857	1 470 000	7.6	6.7-8.7
Health characteristics												
Child's health status												
Excellent or very good	1047	1 160 000	2.1	1.9-2.4	2772	2 814 000	5.2	4.8-5.6	2294	3 005 000	5.5	5.1-6.0
Good	479	545 000	9.8	8.1-11.7	779	1 187 000	21.5	18.0-25.4	684	1 120 000	20.2	17.2-23.5
Fair or poor	140	214 000	18.0	12.4-25.3	203	336 000	28.3	20.9-37.0	187	361 000	30.8	23.0-40.0
Respondent mental or emotional health												
Excellent or very good	817	896 000	1.9	1.7-2.3	2173	2 404 000	5.2	4.7-5.8	1805	2 456 000	5.3	4.9-5.8
Good	537	621 000	5.9	5.0-7.1	1071	1 206 000	11.5	10.2-12.9	892	1 271 000	12.1	10.7-13.8
Fair or poor	288	383 000	13.4	10.9-16.3	443	640 000	22.4	18.2-27.3	385	642 000	22.4	18.2-27.3

CBSA, Core-Based Statistical Area.
*Adjusted for all variables above.
†Includes children who were reported to have current insurance, but did not specify coverage type from a list of 5 types or provide an interpretable write-in.
‡Based on the combination of 3 separate geographical identifiers: CBSA, Metropolitan Statistical Area, and Metropolitan Principal City.

Table II. Unadjusted PRs and aPRs of currently diagnosed depression, anxiety, and behavioral/conduct problems among children aged 3-17 years, by sociodemographic and health characteristics, NSCH 2016

	Currently diagnosed with depression				Currently diagnosed with anxiety				Currently diagnosed with behavioral or conduct problems			
Characteristics	**Unadjusted PR**	**95% CI**	**aPR***	**95% CI**	**Unadjusted PR**	**95% CI**	**aPR***	**95% CI**	**Unadjusted PR**	**95% CI**	**aPR***	**95% CI**
Sociodemographic characteristics												
Sex												
Male	ref		ref		ref		ref		ref		ref	
Female	1.12	0.92-1.36	1.11	0.92-1.36	1.06	0.91-1.22	1.06	0.93-1.21	**0.45**	0.38-0.52	**0.45**	0.39-0.52
Age, y												
3-5	0.01	0.00-0.03	0.02	0.01-0.04	**0.12**	0.09-0.17	**0.14**	0.10-0.20	0.46	0.37-0.57	0.51	0.41-0.64
6-11	**0.28**	0.21-0.36	**0.29**	0.22-0.37	**0.63**	0.53-0.74	**0.64**	0.55-0.75	**1.22**	1.06-1.41	**1.29**	1.12-1.48
12-17	ref		ref		ref		ref		ref		ref	
Race/ethnicity												
Hispanic	**0.63**	0.46-0.86	**0.43**	0.30-0.62	**0.70**	0.55-0.89	**0.59**	0.45-0.76	**0.73**	0.59-0.90	**0.52**	0.42-0.66
Non-Hispanic white	ref		ref		ref		ref		ref		ref	
Non-Hispanic black	1.22	0.89-1.67	**0.71**	0.52-0.97	**0.53**	0.40-0.70	**0.38**	0.28-0.51	**1.42**	1.18-1.71	0.88	0.72-1.07
Non-Hispanic multiracial/other	0.83	0.64-1.08	0.83	0.63-1.10	**0.67**	0.51-0.89	**0.65**	0.53-0.81	0.89	0.69-1.14	**0.80**	0.65-0.99
Family structure												
Two parents, married	ref		ref		ref		ref		ref		ref	
Two parents, unmarried	1.50	0.97-2.31	0.99	0.64-1.54	1.27	0.91-1.77	1.10	0.81-1.49	**2.01**	1.50-2.70	**1.48**	1.16-1.9
Single mother	**2.58**	2.05-3.24	**1.34**	1.04-1.73	**1.51**	1.28-1.78	1.17	0.97-1.41	**2.37**	2.02-2.77	**1.55**	1.31-1.84
Other	**1.96**	1.50-2.54	1.12	0.82-1.53	1.19	0.96-1.49	0.93	0.71-1.22	**2.51**	2.07-3.04	**1.60**	1.27-2.00
Household educational attainment												
Less than high school	**1.60**	1.03-2.50	1.02	0.61-1.71	1.01	0.73-1.41	0.74	0.49-1.11	1.28	0.94-1.73	0.84	0.58-1.21
High school, GED, or vocational training	**1.26**	1.01-1.57	0.82	0.64-1.04	0.95	0.77-1.17	**0.74**	0.60-0.93	**1.23**	1.04-1.45	**0.83**	0.70-0.98
More than high school	ref		ref		ref		ref		ref		ref	
Household poverty												
<100% FPL	**2.00**	1.53-2.61	0.82	0.57-1.18	1.11	0.91-1.36	**0.69**	0.52-0.90	**1.93**	1.62-2.31	**0.76**	0.60-0.96
100%-199% FPL	1.29	0.96-1.73	0.76	0.56-1.04	1.09	0.86-1.37	0.81	0.65-1.02	**1.35**	1.10-1.65	**0.70**	0.66-0.87
200%-399% FPL	1.15	0.85-1.55	0.94	0.71-1.24	1.00	0.84-1.20	0.91	0.78-1.06	1.16	0.96-1.41	0.87	0.74-1.02
≥400% FPL	ref		ref		ref		ref		ref		ref	
Insurance status												
Public only	**2.25**	1.83-2.77	**2.00**	1.53-2.60	**1.49**	1.27-1.76	**1.68**	1.36-2.07	**2.47**	2.14-2.84	**2.17**	1.79-2.64
Private only	ref		ref		ref		ref		ref		ref	
Private and public	**2.60**	1.74-3.88	**1.81**	1.17-2.78	**2.23**	1.69-2.95	**1.88**	1.45-2.42	**3.79**	2.93-4.89	**3.16**	2.44-4.08
Insurance type unspecified†	0.76	0.37-1.54	0.79	0.39-1.60	0.67	0.41-1.08	0.78	0.48-1.27	1.52	0.88-2.64	1.24	0.68-2.26
Not insured	1.24	0.79-1.94	1.05	0.64-1.73	0.57	0.39-0.84	**0.65**	0.44-0.96	0.82	0.59-1.14	0.84	0.59-1.19
Rural/urban location‡												
Not in CBSA	1.30	0.95-1.78	0.85	0.61-1.21	0.97	0.78-1.22	0.81	0.64-1.02	1.21	0.97-1.51	0.96	0.77-1.20
Micropolitan Statistical Area	**1.50**	1.14-1.97	1.16	0.87-1.54	1.03	0.86-1.24	0.88	0.74-1.06	**1.35**	1.12-1.63	1.06	0.89-1.26
Metropolitan Statistical Area	ref		ref		ref		ref		ref		ref	
Metropolitan Principal City	**1.29**	1.02-1.63	1.13	0.90-1.42	0.94	0.78-1.13	0.97	0.81-1.15	1.11	0.94-1.30	0.95	0.81-1.12
Health characteristics												
Child's health												
Excellent or very good	ref		ref		ref		ref		ref		ref	
Good	**4.60**	3.69-5.73	**2.70**	2.05-3.55	**4.15**	3.45-5.00	**3.34**	2.70-4.12	**3.65**	3.06-4.34	**2.54**	2.12-3.05
Fair or poor	**8.44**	5.78-12.32	**5.78**	3.87-8.63	**5.47**	4.07-7.34	**4.80**	3.55-6.49	**5.58**	4.18-7.43	**3.94**	2.93-5.30
Respondent mental or emotional health												
Excellent or very good	ref		ref		ref		ref		ref		ref	
Good	**3.05**	2.42-3.84	**2.08**	1.62-2.68	**2.21**	1.89-2.58	**1.67**	1.41-1.97	**2.28**	1.95-2.66	**1.59**	1.36-1.85
Fair or poor	**6.89**	5.37-8.84	**3.62**	2.68-4.90	**4.30**	3.43-5.40	**2.88**	2.25-3.68	**4.21**	3.38-5.24	**2.39**	1.92-2.99

Bold values are statistically significant results.

*Adjusted for all variables above.

†Includes children who were reported to have current insurance but did not specify coverage type from a list of 5 types or provide an interpretable write-in.

‡Based on the combination of 3 separate geographical identifiers: CBSA, Metropolitan Statistical Area, and Metropolitan Principal City.

Table III. Receipt of past year mental health treatment or counseling among children ages 3-17 currently diagnosed depression, anxiety, and behavioral/conduct problems, by sociodemographic and health characteristics, NSCH 2016

	Currently Diagnosed with Depression				Currently Diagnosed with Anxiety				Currently Diagnosed with Behavioral or Conduct Problems			
	Weighted N	Weighted %	95% CI		Weighted N	Weighted %	95% CI		Weighted N	Weighted %	95% CI	
All children (3-17 y)	1 491 000	78.0	73.9	81.7	2 576 000	59.3	55.5	63.1	2 387 000	53.5	49.9	57.0
Sociodemographic Characteristics												
Sex												
Male	691 000	75.2	67.9	81.3	1 320 000	61.1	55.5	66.4	1 625 000	52.0	47.8	56.1
Female	800 000	80.7	76.2	84.5	1 256 000	57.6	52.2	62.9	762 000	57.0	50.1	63.7
Age, years												
3-5y	6000	*66.42	21.4	93.5	52 000	34.1	22.7	47.7	139 000	34.6	26.0	44.3
6-11y	307 000	74.8	64.2	83.1	885 000	54.9	47.1	62.5	1 140 000	50.8	45.5	56.1
12-17y	1 177 000	79.0	74.4	83.0	1 638 000	63.7	59.7	67.5	1 109 000	60.9	55.7	65.8
Race/ethnicity												
Hispanic	268 000	83.5	74.7	89.6	468 000	51.5	39.7	63.2	419 000	50.6	40.8	60.4
Non-Hispanic white	854 000	78.8	73.4	83.3	1 676 000	61.9	58.4	65.3	1 300 000	54.4	50.3	58.5
Non-Hispanic black	243 000	73.8	60.0	84.1	238 000	66.8	53.7	77.7	463 000	56.0	47.2	64.5
Non-Hispanic multiracial/other	126 000	71.6	59.0	81.6	194 000	52.6	38.3	66.6	206 000	48.6	36.4	61.0
Family Structure												
Two Parents, Married	710 000	79.5	72.9	84.7	1 428 000	57.1	51.8	62.2	1 059 000	53.5	48.7	58.3
Two Parents, Unmarried	121 000	70.2	51.5	83.9	212 000	52.6	36.1	68.5	256 000	50.4	36.0	64.8
Single Mother	470 000	81.5	74.7	86.9	634 000	67.7	61.5	73.4	661 000	56.9	50.5	63.1
Other	178 000	72.0	60.7	81.0	261 000	61.0	50.8	70.3	365 000	52.6	43.7	61.3
Household Educational Attainment	0											
Less than High School	203 000	79.7	59.9	91.2	218 000	53.0	36.8	68.5	301 000	61.6	46.5	74.7
High School, GED, or Vocational Training	300 000	71.8	61.9	80.0	445 000	55.2	44.8	65.0	467 000	47.7	40.4	55.2
More than High School	952 000	80.5	76.4	84.1	1 834 000	61.0	56.7	65.0	1 527 000	53.9	49.8	58.0
Household poverty												
<100% FPL	418 000	67.9	57.7	76.5	542 000	55.6	46.1	64.8	689 000	49.7	42.4	56.9
100-199% FPL	342 000	82.5	74.5	88.4	569 000	56.6	46.6	66.0	598 000	59.0	50.9	66.7
200-399% FPL	370 000	82.0	75.1	87.2	637 000	56.7	49.4	63.8	514 000	48.6	40.8	56.5
≥400% FPL	361 000	84.3	78.1	89.0	828 000	66.9	61.9	71.5	585 000	58.1	51.9	64.1
Insurance Status												
Public Only	690 000	76.0	68.8	81.9	1 023 000	59.8	51.8	67.4	1 177 000	54.3	48.6	59.9
PrivateOnly	579 000	79.6	73.8	84.3	1 215 000	58.3	54.3	62.3	809 000	50.5	46.0	55.0
Private and Public	131 000	89.3	79.1	94.9	251 000	70.0	58.3	79.6	281 000	59.8	46.5	71.8
Insurance Type Unspecified†	11 000	*65.84	34.1	87.8	16 000	38.4	20.4	60.2	37 000	*48.76	24.6	73.5
Not Insured	72 000	73.3	52.3	87.3	62 000	47.8	30.6	65.5	78 000	55.9	40.7	70.1
Region												
Northeast	217 000	80.1	68.7	88.1	455 000	60.9	53.8	67.5	358 000	53.8	45.6	61.8
Midwest	403 000	78.6	70.7	84.8	654 000	63.6	58.3	68.6	635 000	61.8	56.2	67.1
South	556 000	76.4	68.6	82.8	935 000	60.1	53.8	66.0	941 000	50.0	44.5	55.5
West	316 000	79.0	70.5	85.5	531 000	52.8	42.2	63.1	453 000	50.9	41.2	60.5
Rural/Urban Location‡												
Not in CBSA	60 000	65.7	49.9	78.7	101 000	54.8	44.0	65.1	110 000	51.2	40.8	61.5
Micropolitan Statistical Area	139 000	70.3	57.0	80.9	199 000	56.1	47.9	64.0	223 000	50.6	42.4	58.8
Metropolitan Statistical Area	757 000	79.7	73.8	84.5	1 450 000	58.1	53.0	63.0	1 225 000	51.9	47.1	56.8
Metropolitan Principal City	535 000	79.7	72.1	85.6	827 000	63.3	55.2	70.7	829 000	57.2	50.4	63.7
Health Characteristics												
Severity of diagnosed condition												
Mild	647 000	74.6	68.4	79.9	935 000	48.3	43.3	53.3	757 000	43.9	38.9	49.1
Moderate	663 000	79.2	72.4	84.7	1 370 000	67.2	60.7	73.2	1 126 000	53.8	48.3	59.2
Severe	165 000	89.0	77.2	95.0	240 000	74.4	63.9	82.6	446 000	78.0	69.5	84.6
Child's health												
Excellent or very good	892 000	77.5	71.8	82.4	1 657 000	58.9	55.2	62.5	1 535 000	51.4	47.6	55.3
Good	419 000	78.4	71.5	84.0	695 000	59.0	48.4	68.9	630 000	56.8	48.0	65.2
Fair or poor	166 000	79.5	64.3	89.3	207 000	62.6	48.6	74.7	209 000	59.9	46.1	72.3
Current Depression		N/A			1 135 000	81.7	77.2	85.5	752 000	84.3	78.4	88.7
Current Anxiety	1 135 000	81.7	77.2	85.5		N/A			1 191 000	73.7	67.4	79.1
Current Behavioral or Conduct Problems	752 000	84.3	78.4	88.7	1 191 000	73.7	67.4	79.1		N/A		
Respondent Mental or Emotional Health												
Excellent or very good	708 000	79.5	72.7	84.9	1 382 000	57.6	52.2	62.9	1 229 000	50.3	45.9	54.8
Good	503 000	83.5	78.2	87.7	769 000	64.3	58.8	69.5	708 000	56.4	49.8	62.8
Fair or poor	261 000	68.0	57.6	77.0	377 000	58.9	46.7	70.1	393 000	61.5	49.2	72.5

CI, Confidence Interval; *GED*, General Equivalency Diploma; *FPL*, Federal Poverty Level.
*Adjusted for all variables above.
†Includes children who were reported to have current insurance, but did not specify coverage type from a list of five types or provide an interpretable write-in.
‡Based on the combination of three separate geographical identifiers: Core Based Statistical Area (CBSA), Metropolitan Statistical Area (MSA), and Metropolitan Principal City (MPC).

Table IV. Unadjusted PRs and aPRs of receipt of past-year mental health treatment or counseling among children aged 3-17 years currently diagnosed depression, anxiety, and behavioral/conduct problems, by sociodemographic and health characteristics, NSCH 2016

	Currently diagnosed with depression				Currently diagnosed with anxiety				Currently diagnosed with behavioral or conduct problems			
Characteristics	**Unadjusted PR**	**95% CI**	**aPR***	**95% CI**	**Unadjusted PR**	**95% CI**	**aPR***	**95% CI**	**Unadjusted PR**	**95% CI**	**aPR***	**95% CI**
Sociodemographic characteristics												
Sex												
Male	ref		ref		ref		ref		ref		ref	
Female	1.07	0.97-1.19	1.08	0.98-1.18	0.94	0.83-1.07	1.00	0.90-1.11	1.10	0.95-1.27	1.07	0.95-1.22
Age, y												
3-5	0.84	0.43-1.64	0.99	0.73-1.33	**0.54**	0.37-0.78	**0.71**	0.54-0.93	**0.57**	0.43-0.75	0.83	0.67-1.05
6-11	0.95	0.82-1.09	0.96	0.85-1.08	0.86	0.74-1.01	0.96	0.86-1.07	**0.83**	0.73-0.95	0.98	0.87-1.11
12-17	ref		ref		ref		ref		Ref		ref	
Race/ethnicity												
Hispanic	1.06	0.95-1.18	1.06	0.95-1.19	0.83	0.66-1.06	0.88	0.74-1.06	0.93	0.75-1.15	0.90	0.75-1.07
Non-Hispanic white	ref		ref		ref		ref		Ref		ref	
Non-Hispanic black	0.94	0.79-1.12	1.01	0.88-1.15	1.08	0.89-1.31	0.97	0.79-1.19	1.03	0.87-1.22	1.01	0.86-1.19
Non-Hispanic multiracial/other	0.91	0.77-1.08	0.93	0.80-1.08	0.85	0.64-1.13	0.80	0.63-1.02	0.89	0.68-1.17	0.84	0.65-1.10
Family structure												
Two parents, married	ref		ref		ref		ref		Ref		ref	
Two parents, unmarried	0.88	0.69-1.13	0.97	0.82-1.15	0.92	0.66-1.28	0.94	0.73-1.21	0.94	0.69-1.28	0.98	0.77-1.25
Single mother	1.03	0.92-1.14	1.08	0.98-1.20	**1.19**	1.05-1.35	**1.16**	1.03-1.31	1.06	0.92-1.23	1.05	0.91-1.22
Other	0.91	0.77-1.06	0.94	0.81-1.08	1.07	0.89-1.29	0.98	0.81-1.19	0.98	0.81-1.19	1.00	0.81-1.22
Household educational attainment												
Less than high school	0.99	0.81-1.21	1.00	0.84-1.19	0.87	0.63-1.19	0.92	0.72-1.19	1.14	0.89-1.46	1.13	0.90-1.42
High school, GED, or vocational training	0.89	0.78-1.02	0.96	0.86-1.07	0.90	0.74-1.10	0.99	0.85-1.14	0.89	0.74-1.05	0.88	0.75-1.04
More than high school	ref		ref		ref		ref		Ref		ref	
Household poverty												
<100% FPL	**0.80**	0.69-0.94	**0.72**	0.57-0.90	0.83	0.69-1.00	**0.67**	0.53-0.84	0.85	0.71-1.03	**0.74**	0.59-0.94
100%-199% FPL	0.98	0.88-1.09	0.93	0.82-1.04	0.85	0.70-1.02	**0.80**	0.68-0.93	1.02	0.86-1.21	0.95	0.81-1.12
200%-399% FPL	**0.97**	0.88-1.07	0.97	0.89-1.06	**0.85**	0.73-0.98	**0.83**	0.74-0.93	**0.84**	0.69-1.02	**0.81**	0.70-0.93
≥400% FPL	ref		ref		ref		ref		Ref		ref	
Insurance status												
Public only	0.95	0.86-1.06	1.09	0.95-1.25	1.03	0.88-1.19	1.11	0.95-1.30	1.08	0.94-1.23	1.10	0.92-1.31
Private only	ref		ref		ref		ref		Ref		ref	
Private and public	**1.12**	1.01-1.25	1.15	0.99-1.34	**1.20**	1.01-1.42	**1.24**	1.05-1.46	1.19	0.94-1.50	1.11	0.91-1.35
Insurance type unspecified[†]	0.83	0.53-1.30	1.05	0.77-1.44	0.66	0.38-1.14	0.89	0.43-1.11	0.97	0.55-1.68	1.05	0.63-1.77
Not insured	0.92	0.71-1.19	1.05	0.86-1.30	0.82	0.56-1.21	0.87	0.65-1.15	1.11	0.83-1.47	1.01	0.73-1.38
Rural/urban location[‡]												
Not in CBSA	0.82	0.65-1.04	0.93	0.79-1.10	0.94	0.76-1.17	1.02	0.85-1.23	0.99	0.79-1.23	1.01	0.81-1.27
Micropolitan Statistical Area	0.88	0.73-1.06	0.93	0.81-1.08	0.97	0.82-1.14	0.90	0.76-1.06	0.97	0.81-1.18	1.01	0.84-1.20
Metropolitan Statistical Area	ref		ref		ref		ref		Ref		ref	
Metropolitan Principal City	1.00	0.90-1.11	1.01	0.92-1.11	1.09	0.94-1.27	1.07	0.95-1.19	1.10	0.95-1.28	1.09	0.95-1.24

(*continued*)

Table IV. Continued

Characteristics	Currently diagnosed with depression				Currently diagnosed with anxiety				Currently diagnosed with behavioral or conduct problems			
	Unadjusted PR	95% CI	aPR*	95% CI	Unadjusted PR	95% CI	aPR*	95% CI	Unadjusted PR	95% CI	aPR*	95% CI
Health characteristics												
Severity of diagnosed condition												
Mild	ref		ref		ref		ref		Ref		ref	
Moderate	1.06	0.95-1.18	1.04	0.95-1.14	**1.39**	1.21-1.60	**1.27**	1.14-1.43	**1.22**	1.05-1.43	1.13	0.99-1.28
Severe	**1.19**	1.05-1.35	**1.17**	1.05-1.29	**1.54**	1.31-1.81	**1.23**	1.02-1.48	**1.78**	1.53-2.07	**1.50**	1.26-1.80
Current depression		NA			**1.67**	1.50-1.87	**1.56**	1.40-1.74	**1.85**	1.67-2.06	**1.60**	1.40-1.83
Current anxiety	**1.22**	1.06-1.40	**1.12**	1.00-1.25		NA			**1.78**	1.56-2.02	**1.42**	1.26-1.61
Current behavioral or conduct problem	**1.16**	1.05-1.28	**1.21**	1.09-1.33	**1.45**	1.28-1.64	**1.33**	1.19-1.48		N/A		
Child's health												
Excellent or very good	ref		ref		ref		ref		Ref		ref	
Good	1.01	0.91-1.12	0.96	0.87-1.06	1.00	0.83-1.21	0.93	0.80-1.07	1.10	**0.93-1.31**	0.90	0.77-1.06
Fair or poor	1.03	0.86-1.22	1.04	0.91-1.20	1.06	0.85-1.33	0.87	0.67-1.13	1.16	**0.92-1.47**	0.80	0.60-1.06
Respondent's mental or emotional health												
Excellent or very good	ref		ref		ref		ref		ref		ref	
Good	1.05	0.95-1.16	1.06	0.96-1.16	1.12	0.99-1.27	1.00	0.90-1.11	1.12	0.97-1.30	1.04	0.92-1.17
Fair or poor	0.86	0.73-1.01	0.91	0.79-1.04	1.02	0.82-1.28	0.96	0.80-1.16	1.22	0.99-1.51	1.05	0.84-1.30

Bold values are statistically significant results.
*Adjusted for all variables above.
†Includes children who were reported to have current insurance, but did not specify coverage type from a list of 5 types or provide an interpretable write-in.
‡Based on the combination of 3 separate geographical identifiers: CBSA, Metropolitan Statistical Area, and Metropolitan Principal City.

(100%-199% FPL) with anxiety problems and those living in households at 200%-399% FPL with anxiety or behavior/conduct problems. Insurance status was not significantly associated with receipt of treatment among children with depression or behavioral/conduct problems; however, among children with anxiety problems, those with combined public and private coverage were 1.2 times more likely with those with private coverage to have received treatment. Condition severity and presence of a selected comorbid mental disorder were associated with receipt of treatment among children with each of the disorders; children with a "severe" disorder were 1.2-1.5 times more likely to have received treatment compared with those with a "mild" disorders. Among the comorbidities included, current depression appeared to have the greatest impact on treatment receipt; in those with either anxiety or a behavior/conduct problem, concurrent depression was associated with an approximately 1.6-fold greater likelihood of receiving treatment compared with those without this comorbidity.

Discussion

Using the most recent nationally representative data from the redesigned NSCH, our findings affirm that depression, anxiety problems, and behavioral/conduct problems remain common among children and extend what is known about the prevalence among children as well as subpopulations in whom treatment gaps persist. Consistent with existing epidemiologic studies, behavioral or conduct problems were more common in boys than in girls, and both anxiety and behavioral/conduct problems were more common than depression.[15,16] Regarding comorbid mental disorders, we found that nearly 3 in 4 children with depression had concurrent anxiety, whereas 1 in 3 children with anxiety had concurrent depression. These disorders share a common etiology, and longitudinal studies have identified childhood anxiety as a risk factor for developing depression.[17,18] The data also highlight significant associations between childhood mental disorders and children's overall health, as well as parents/caregivers' mental and emotional health.

The prevalence estimates for both anxiety and behavior/conduct problems in this study were higher than those reported previously from other surveys.[2,19,20] For example, prevalence estimates based on data from the 2007 National Health Interview Survey (an in-person survey) and the 2011-2012 NSCH (a telephone survey) were only one-half those reported herein, although estimates for depression were comparable. Differences in data collection mode and questionnaire wording may explain some of the differences; for example, the inclusion of behavioral/conduct diagnoses by educators in the present study might have affected prevalence estimates, particularly for mild/moderate cases.

This study highlights differences in the receipt of treatment among those with each of these disorders. Treatment guidelines, particularly regarding prescription medication, for children with mental disorders are more firmly established for depression than for anxiety and behavioral/conduct problems.[21,22] In addition, anxiety and behavioral/conduct problems can sometimes be addressed in primary or educational settings, focusing on parenting behavior and behavioral management strategies rather than on direct provision of treatment to the child.[23] These differences, along with identification of condition severity, co-occurrence of disorders, and higher household income as the main predictors of treatment receipt, highlight the complexity of treatment provision and utilization for children with mental disorders.

Although children's overall health and parents/caregivers' mental and emotional health were related to disorder prevalence, these health-related factors were not significantly associated with receipt of treatment. These findings are consistent with the literature[24-27] documenting a greater risk of mental health problems among children with parents with a mental health problem, which may be due to shared genetic and biological predispositions as well as with environmental factors and the parent-child relationship. Although most research suggests that caregivers' mental health status can impact children's mental health, it is possible that bidirectional effects also may occur wherein a child's mental and behavioral health may impact that of their parents/caregivers. On the other hand, treatment utilization in children might be directly associated not with the parents' mental health, but rather with structural constraints and barriers associated with the parents' perceptions of mental health problems and services,[28] perhaps benefiting from their own treatment utilization.[29] Future research is needed to explore types of treatments received beyond the specialty mental health services described herein, settings in which those services are received, and related barriers and facilitating factors associated with treatment access and utilization.

The finding that after adjustment, children from low-income families were less likely to be diagnosed and treated for mental disorders is notable given previous research from various disciplines demonstrating the wide-ranging negative effects of poverty on mental and emotional health in children (and adults).[30] Our results likely reflect the use of a measure of diagnosed mental health conditions, which by definition suggests access to a provider who is able to make such a determination. In fact, we found that irrespective of disorder, children from poor households were less likely to receive treatment from a mental health professional. Care for pediatric depression, anxiety, and behavioral/conduct problems is commonly sought in pediatric primary care settings,[31,32] and low-income parents may be more likely to seek care in such settings. The NSCH items do not capture data regarding such treatment. In previous studies, providers in these settings have reported several barriers to the provision of this care, including a lack of training in treating child behavioral health problems and a lack of confidence in treating children who need counseling.[33] Even with training, pediatricians frequently report challenges in providing access to behavioral health care in these settings.[34]

Finally, consistent with previous research,[2,13,35] we noted significant differences in the likelihood of both diagnoses and receipt of related treatment by race and ethnicity that we attribute to a combination of factors, including access to care,

resiliency, and the potential for diagnostic bias. Limitations in the access to care more broadly among Hispanic and African American children may suggest that these children are less likely to be seen by health providers and diagnosed with the conditions examined in this study.[36] On the other hand, resiliency factors, such as family closeness, may protect these youth from other risk factors associated with these diagnoses.[37] Furthermore, racial and ethnic inequities in diagnosis, such as bias related to conduct problems, also may help explain the higher prevalence of behavioral/conduct problems among African American children.[38]

Several limitations of the data should be noted. First, data on both diagnoses and treatment are based on parent/caregiver report and may be subject to recall bias. However, research has shown good agreement between parental report and clinical records in a range of both past-year and lifetime diagnoses and health events.[39] In addition, Kentgen et al found high test-retest reliability for maternal reports of diagnosed mental health conditions among their children,[40] suggesting that parents' reports of diagnoses may be less problematic. Second, the wording of survey items differed among the 3 disorders, thereby limiting comparability, because parents might have interpreted questions about anxiety and behavior/conduct "problems" differently than those about depression that did not include this qualifier. Third, detailed information about the setting, type, or duration of treatment or counseling was not reported, and thus estimates may vary depending on parents' perceptions of the types of services received. In addition, we are unable to examine whether the care that children are receiving is consistent with evidence-based recommendations for each of these disorders. Finally, the weighted response rate for the survey was 40.7%, which may have resulted in nonresponse bias; however, nonresponse bias analyses suggest that the application of survey weights to these analyses attenuated resulting bias.[41]

This study provides the latest nationally representative estimates of both multiple diagnosed mental disorders and receipt of related treatment across the US pediatric population. Depression, anxiety, and behavioral/conduct problems remain prevalent among US children, although significant disparities persist with respect to receipt of related treatment. Future research to better understand the factors associated with and implications of observed differences in treatment receipt by condition could inform programmatic opportunities to support diagnostic and treatment services. ■

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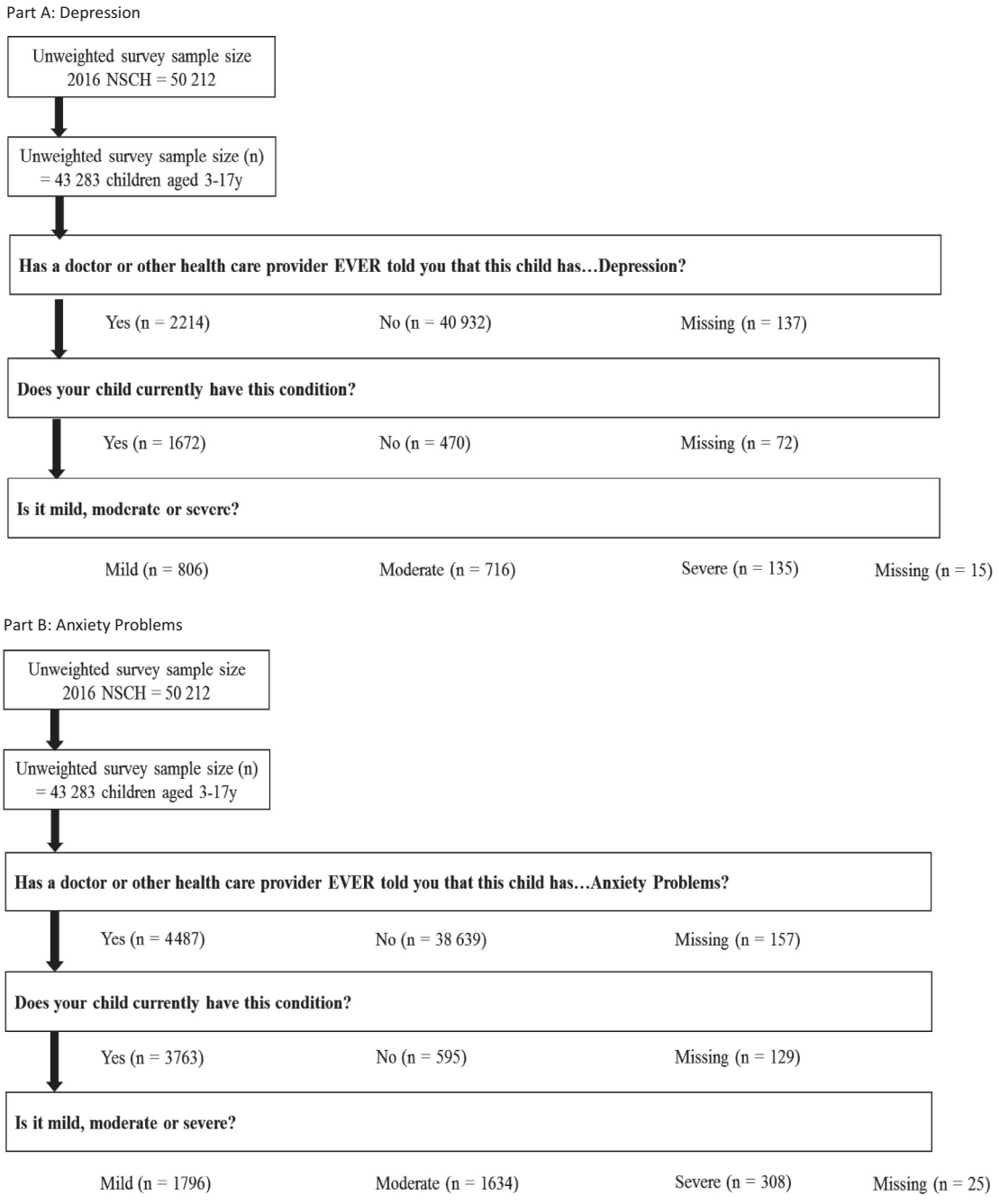


Figure. Unweighted survey sample sizes for children 3-17 years with valid data for depression, anxiety problems, behavior or conduct problems, and receipt of related treatment, national survey of children's health, 2016. (*Continues*)

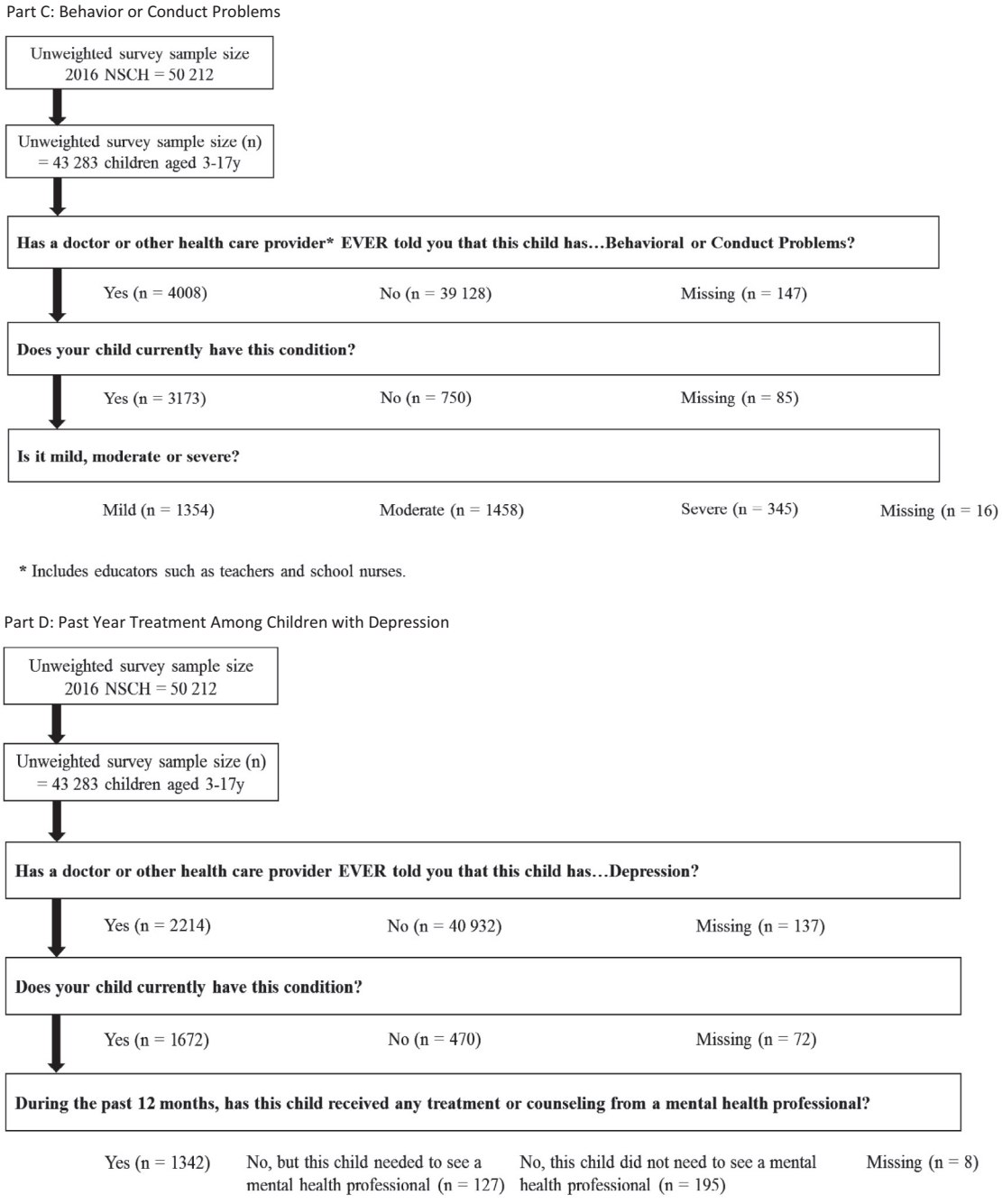


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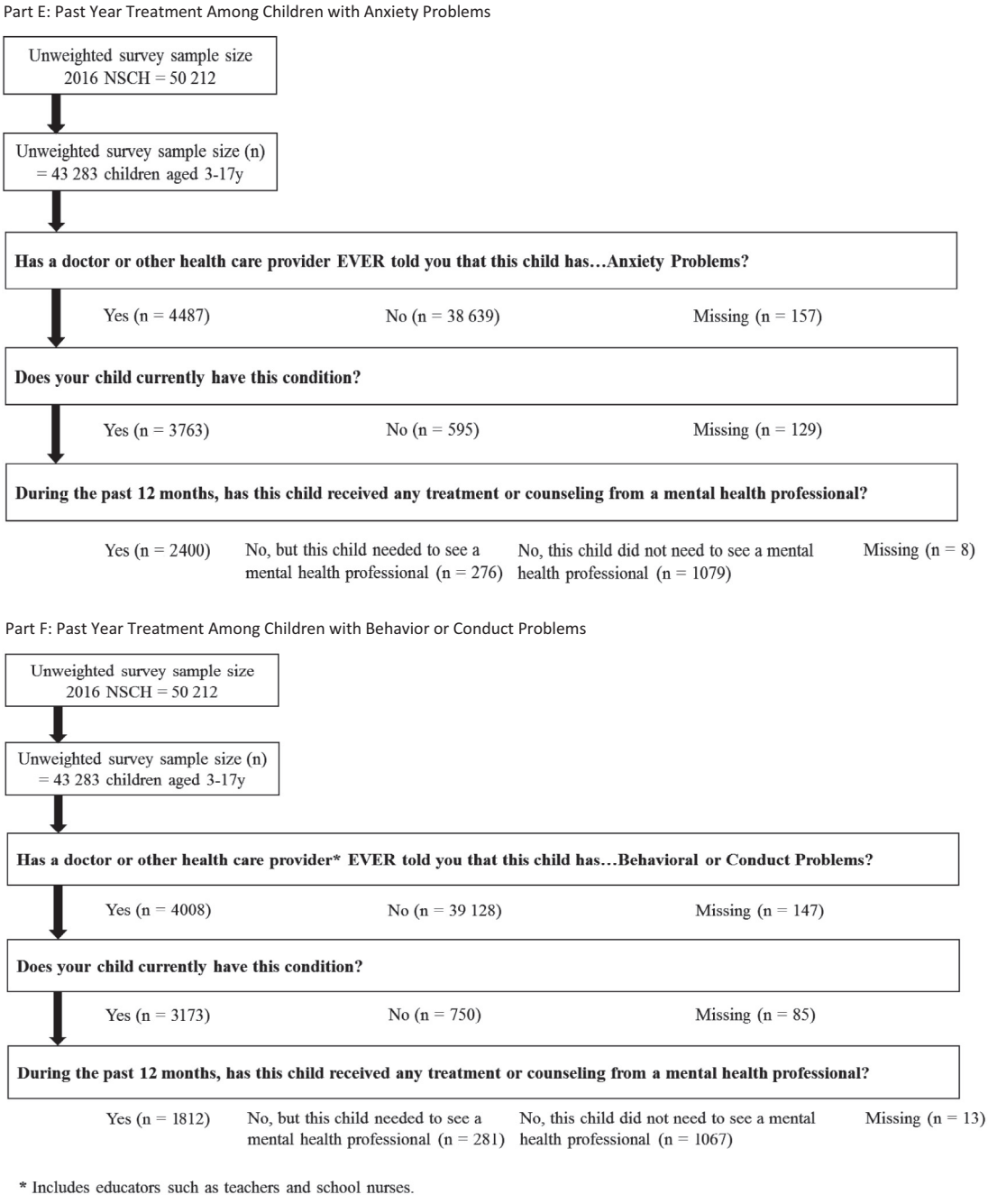


Figure. Continued.