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## **The 12- year prevalence and trends of childhood disabilities in Australia: Findings from the Survey of Disability, Aging and Carers (SDAC)**

**Diana H. Arabiat | Lisa Whitehead | Mohammad AL Jabery**

### **Abstract**

**Aim:** This paper contributes to knowledge on the prevalence and nature of disabilities in Australian children over a 12-year period (2003-2015). Understanding the current state of childhood disability is imperative for predicting future needs for long-term care and early intervention services for this population.

**Methods:** We used data on children 0-14 years from the 2003, 2009, 2012 and 2015 survey of Disability, Aging and Carers (SDAC), which is an ongoing national survey covering both rural and urban areas of all States and Territories of Australia.

**Results:** Using the test for trends in population, no significant increases were noted in the prevalence of childhood disabilities over the last 12 years, although the prevalence of any developmental disability increased from 6.9% to 7.42% between 2009 and 2015. The rate and severity of disability was higher among boys compared with girls of the same age for a number of selected disabilities and higher for children aged 5-14 years.

**Conclusions:** With the anticipated rise in psychological related disability among Australian children, there is a need to ensure availability of a flexible and responsive model of service delivery for this population. This also implies that respite service coverage may need to be substantially increased to meet children and caregivers' needs.

**Keywords:** Disabilities; Children; Australia; Prevalence; ABS-SDAC; Trends.

## INTRODUCTION

Developmental disabilities contribute significantly to overall childhood health (Boyle et al. 2011, Bitsko et al. 2016). Understanding the current state of childhood disability is imperative for predicting future needs for long-term care and early intervention services for this population. In Australia, improving the existing disability services system and advancing the rights and social inclusion of people with a disability is an ongoing issue and major gaps have been identified in the ability of health services to respond to the needs of this population (Productivity Commission, 2011). Knowledge of disability among children in Australia is hindered by a number of factors; paucity of publications, indigenous children were not identified before the 2003 ABS-SDAC studies, and the lack of appropriate measures for early developmental delay for infants and preschool children (Department of Health and Families & Graduate School for Health Practice 2010; D'Aprano *et al.* 2016).

Since the 1980s, The Australian Bureau of Statistics (ABS) Survey of Disability, Aging and Carers (SDAC) has been the main source for estimating the childhood prevalence of disabilities. Findings from the ABS and the Australian Institute of Health and Welfare (AIHW) analysis of the survey suggest that the proportion of children aged 0-14 years living with disability decreased from 8.2% in 2003 to 7.0% in 2009 (ABS and AIHW, 2015; ABS, 2012). However, more recent findings, although not conclusive, suggest an increase in prevalence of reported health conditions associated with disability among Australian children, such as autism (Hansen, Schendel, & Parner, 2015) and childhood psychiatric disorder (Atladottir et al. 2015).

In 2004, the AIHW expressed its concerns that some chronic illnesses and risk factors associated with childhood disabilities are on the rise among Australian children. The possible

reasons related to the increased rate of childhood disabilities include advances in obstetric and perinatal care associated with increased survival rates of low birth babies, advances in diagnostic methods of ADHD and autism in educational and clinical settings and service improvements supporting children with chronic conditions related to functional disability to live in community settings.

The national prevalence of childhood disability among those 14 years of age and younger for the years 2003, 2009, 2012, and 2015 is available from the ABS and using census data, it is possible to examine trends over time for a number of disabilities.

In this paper, the ABS data is used to examine change in the prevalence of childhood disabilities for children aged 0-14 years to build knowledge and awareness of the related prevalence and the nature of developmental disabilities in Australia and provides a benchmark for the monitoring and progressive implementation of the National Disability Strategy 2010-2020.

## **METHODS**

### ***Data Source***

Data were sourced from the Australian Bureau of Statistics (ABS) Survey of Disability, Aging and Carers (SDAC) from 2003 to 2015. The SDAC is an important source of national population data on children aged 0 to 14 years, covering both rural and urban areas in all States and Territories of Australia (AIHW, 2004; ABS, 2010). The survey, normally conducted every 3 years, gathers data from both households and those in hospitals, nursing homes and hostels, to ensure the survey represented a comprehensive picture of disability in Australia.

The ABS conducted the SDAC surveys using a multistage sampling technique of private and non-private dwelling to select the sample for the survey in 2003, 2009, 2012 and

2015. Each state and territory was stratified and each stratum contains a number of Population Census Collection Districts (CDs) containing on average about 250 dwellings. The sample was selected to ensure that each dwelling within a stratum had the same probability of selection. Demographics and health data on children were obtained through proxy interviews and by trained interviewers (ABS, 2010).

### ***Disability Measure***

The SDAC is based on a series of 17 screening questions of a parent or legal guardian to establish whether the household included a person with one or more disabilities. The ABS included The International Classification of Functioning, Disability and Health (ICF; World Health Organization, 2002) to help identify a person with a disability (ABS, 2010).

According to the ABS report by the AIHW (2004), disability was defined as *“a disease or disorder that has lasted or is likely to last for at least six months; or a disease, disorder or event (e.g. stroke, poisoning, accident etc.) that leads to an impairment or restriction that has lasted or is likely to last at least six months, p 13)”*.

Since 1981, the SDAC has been periodically modified to enhance data collection in the field of disability and of direct relevance to this paper, the SDAC was revised in 2015. New criteria were created to identify disability and disability status, mainly social and behavioural difficulties, memory loss and periods of confusion and dementia (ABS, 2015). Because the 2015 changes were particularly important in redefining disability and may complicate time series comparisons analysis, data items using the 2012 definition of disability and disability status were used in this analysis.

In Australia, disabilities were categorised by the ABS into five groups: Intellectual disability (learning or understanding difficulties); Psychiatric disability (mental illness or nervous condition), Sensory/speech disability (sight, hearing or speech problems), Physical

diverse disability (difficulty gripping things, limited use of legs or feet, conditions that restrict physical activity or physical work, disfigurements or deformities, blackouts, fits or loss of consciousness); and Acquired brain injury (acquired or birth head injury, stroke or other brain damage) (ABS, 2010).

For the purpose of this study, results were presented by disability group and an individual could be classified in more than one disability group. The specific conditions assessed by the survey were Core Activity Limitation (profound, severe, moderate or mild restrictions), School Restriction and Disability Groups. If a child reported a disability other than the disability group listed earlier, they were included only in the analysis by disability but not by impairment type (ABS, 2010).

### ***Method of Analysis***

The analysis of the SDAC- microdata was performed using the datasets available in Census TableBuilder for the survey in 2003, 2009, 2012 and 2015. TableBuider is an online tool designed for persons with knowledge and experience of census concepts to create tables and graphs of ABS census data. Categories displayed in tables, including raw data and columns for summary statistics are often based on predefined categories and descriptive labels assigned to pre-defined variables (for example, numeric values 0 and 1, with value labels of boy and girl).

The analysis was limited to children aged 0-14 years (unweighted sample size 16,704). Tables were predefined for each dataset using the ABS-TableBuilder, (<http://www.abs.gov.au/about/microdata>) and then the prevalence of any parent- reported core activity limitation, school restriction and each individual disability group for each year were examined for variation by the child's age and gender. Differences in prevalence

estimates between the groups were compared ( $X^2$  test) and linear trends over the 12-year time period (Wald F-tests).

## RESULTS

The prevalence of disabilities among Australian children (2003, 2009, 2012 and 2015) is presented in Table 1. The rate and severity of disability was higher among boys compared with girls of the same age for a number of selected disabilities and higher for older children aged 5-14 years compared with children aged 0-4 years. Disability rates increased among children by age, from 3.45% of children aged 0-4 years to 9.32% of those aged 5-14 years. Moreover, the prevalence of total disability for boys and girls from 2003 to 2015 indicates that boys were nearly twice as likely to have a disability compared to girls in the same age group.

[INSERT TABLE 1. ABOUT HERE]

The statistical significance of change over time in the prevalence is presented (table 2) and indicates a small, but non-significant decrease since 2003. This indicates that the reduction in all disability prevalence would have been 0.25% per cohort. While the increase in the psychological disability was statistically significant ( $P \leq 0.05$ ), the predicted increase in the actual prevalence of disability was small and not significant. A visual examination of figure 1 provides an indication of the consistency of prevalence data. It does not indicate any clear time trend in the total percentage of children reporting one or more disability.

[INSERT TABLE 2. ABOUT HERE]

[INSERT FIGURE 1. ABOUT HERE]

Estimates of children with a disability core limitation are shown in figure 2. In general, change in the disability status appears equally irregular. The percentage of children

with schooling restrictions are virtually identical between 2003 and the 2015, although the percentages of children with core activity limitations were considerably higher in 2003. The percentage of children with profound/severe core activity limitation decreased between 2003 and 2012 with a slight increase in 2015.

[INSERT FIGURE 2. ABOUT HERE]

The estimates of disability according to reported limitations, using criteria common to all surveys showed that between 2003 and 2015 boys were more likely to report a higher rate and severity of disability, as well as schooling restrictions compared to girls ( $P \leq 0.05$ ), and children aged 5-14 years reported a higher rate of profound core activity restriction compared to children aged 0-4 years ( Table 3), yet, none of these observations influence the total prevalence rate of disability, or time trends at a level of statistical significance

[INSERT TABLE 3. ABOUT HERE]

An analysis of the main conditions reported by children found that intellectual disability and sensory or speech disability were the most commonly reported disability groups among children aged 0-14 years (see Table 4). In general, there have been minor changes in the reported prevalence rate of disabling conditions reported for children 0-14 years with no obvious trends over time in the prevalence of sensory or speech disability, and physical restrictions. An exception was an increase in the reported prevalence of psychological difficulties for children. Between 2003 and 2015, the reported rate increased from 0.91% to 1.74%, and consistent with other disability types, boys were twice as likely to have psychological disabilities compared to girls.

[INSERT TABLE 4. ABOUT HERE]

In relation to the type of disability, consistent with findings reported for the main disabling condition reported for children aged 0-14 years; speech disability and an intellectual



disability are the most common reported type of disability across all surveys. The reported prevalence of learning disabilities was high (Table 5) at 4.19% in 2003 before becoming stable at 3.85 % - 3.64% in the 2009-2012 ABS survey followed by a slight decrease to 2.90% in the 2015 ABS survey. In all surveys, fluctuation was noted rather than a clear trend in the prevalence of disability, yet, speech and learning disabilities continued to be higher among boys compared with girls of the same age ( $P \leq 0.05$ ).

[INSERT TABLE 5 ABOUT HERE]

## **DISCUSSION**

This study was based upon national data from the Australian Bureau of Statistics disability surveys conducted in 2003, 2009, 2012 and 2015. Using the test for trends in population, no significant increase in the prevalence of childhood disabilities or the rate of severe disability were noted. Overall, we found that 7.42% of children aged 0-14 years had at least one reported disability on the basis of the 2015 survey compared to 6.9% in 2003 and 2012. The reported rate was significantly higher among boys compared with girls of the same age, as well as among children aged between 5-14 years compared with children 0-4 years. The most likely factor contributing to differences according to age is that many disabilities are not recognised or diagnosed in children before the age of 3 years (Boyle et al. 2011; Atladottir et al. 2015).

Nationally, psychological difficulties demonstrated significant and successive increases over time among children of all ages. This is consistent with the Australian Institute of Health and Welfare (AIHW, 2004) report of the ABS survey of Disability (1981-1998) and of the 1997-2008 report of disabilities in children in the United State of America (USA) (Boyle et al. 2011). Further, a recent study reported a significant increase in the prevalence of neuropsychiatric disorders, such as autism and attention deficit hyperactivity syndrome

(ADHD) for children in the last 20 years (Atladottir et al. 2015). Nationally, the number of children identified with Autism and ADHD has increased dramatically with the advances screening and early intervention (ABS, 2012), hence, it is likely that the increased reported prevalence of advances in screening program would impact on prevalence. Changes in prevalence rate reported in the past decade are associated with an increased awareness of conditions such as autism and ADHD (Polanczyk, Willcutt, Salum, Kieling, and Rohde, 2014).

Overall, the prevalence of childhood disabilities was slightly higher in 2015 compared with those in 2009 and 2012. Yet, this increase was not statistically significant. When considering each type of disability, the main disability groups reported were intellectual disability followed by sensory or speech difficulties and physical restrictions. However, some variations remain across the surveys, particularly in relation to the prevalence of breathing difficulties with a significant decrease in the number of children reporting breathing difficulties between 2003 and 2015. It is suggested that children included in some of the categories (e.g., speech difficulty/stuttering, breathing difficulties) may have had transient conditions that may overestimate the prevalence of these conditions at one point (Boyl et al. 2011).

The impact of learning disabilities on schooling decreased in 2015 compared to previous years. This may reflect the role of the educational system on the identification and management of intellectual or specific learning difficulties among children. However, the ongoing modification of survey questions may have also played a part (AIHW, 2004; ABS, 2015), though, the precision of this reasoning cannot be identified and this is a limitation of the study. This is mainly related to the fact that there is an overlap between disability groups. For example, many children experience health conditions such as cerebral palsy may report more than one disability group such as intellectual and psychiatric disability. Significantly,

none of the modifications may influence either the overall prevalence or the time trends as we examined trends in categories of disability using a similar set of questions with good agreement with the 2012 definition.

Significantly, our attempt to compare estimates of disabilities by indigenous group, remoteness, state and socio-demographic could not be completed. The relative standard error was greater than 50% in our analysis and therefore, data were considered too unreliable for general use. This may reflect the accuracy with which the current sample represents the Northern Territory estimates or rural communities. In particular, since the ABS survey excluded discrete Aboriginal and Torres Strait Islander communities until 2012; data remain scarce and incomplete. The difference between estimates derived from the current sample, and the potential value if all people with disability in remote and rural areas of Australia were included is too large. Significantly, the ABS and the AIHW reports suggested the population estimates of disability among Australian children aged 0-14 years was at least 6.6% for non-indigenous children compared to 14.2% for Aboriginal and Torres Strait Islander children (ABS, 2009). The increased prevalence of developmental delay and disability in Aboriginal children has been related to the presence of multiple risk factors facing aboriginal children (D'Aprano, Carapetis, & Andrews, 2011).

Any explanation of the findings from the SDAC needs to be evaluated in light of what might affect the rate of psychological disabilities but not all disabilities. While the SDAC is a nationally representative sample, allowing for generalizability to Australian children 0-14 years, there are limitations. A major limitation of this study is that the SDAC does not include accurate estimates for the indigenous population of Australia. Therefore, the prevalence rate likely underestimates the total population of children with disabilities. Furthermore, we noted concerns that the questions used in the SDAC may have missed many children with functional developmental disabilities, in particular among infants and very

young children. Inaccurate reporting in parent or guardian reports may also result in under estimation of actual disability. This points to the need to include more questions to screen early developmental disabilities among both indigenous and non-indigenous children, as well as to establish further research and collaboration at the local and the international level.

In conclusion, we found that there is no clear ongoing trend in the prevalence of disabilities amongst Australian children in the last 12 years; yet psychological difficulties associated with childhood disability are on the rise. An understanding of the changing patterns of childhood disabilities is pertinent for both policy makers and service providers to plan provision of appropriate services and assistance to meet the needs for social services, early intervention and medical specialists. Given the recent changing policy of the National Disability Insurance Agency (Mithen, Aitken, Anna Ziersch, Kavanagh, 2015) the ongoing burden on families and caregivers will need to be considered. Implications for health service provision implies that respite service coverage may need to be substantially increased to meet children and caregivers' needs. As with the anticipated rise in psychological related disability, there is a need to ensure availability of a flexible and responsive model of service delivery for this population. Clinicians, educators and policy-makers need to work toward improving integration between respite and other support services in a way that helps meet children and carers' needs as they arise.

In the absence of solid and harmonized data on disability for the indigenous population of Australia, more work is needed. Additional study of the influence of risk factors and the relationship between the significance of change over time will highlight any variations. Assessing the functional consequences or core activity limitations for each area of disability, rather than generically may provide a clearer picture to inform governments on appropriate policy and programmatic responses to meet the needs of children with disabilities.

## Key Messages

- Trends in population show no significant increases in the prevalence of total childhood disabilities over the last 12 years.
- Specific health conditions associated with childhood disability amongst Australian children are on the rise; in particular, for psychological difficulties.
- The rate and severity of disability is higher among boys compared with girls of the same age.
- The rate and severity of disability is higher among children aged 5-14 years.

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## Tables

Table 1. Number and Percentage of Children with a Disability by Age and Sex, ABS-SDAC, 2003-2015

	Boys			Girls			All children		
	Total children with a disability (per thousand)			Total children with a disability (per			Total children with a disability (per thousand)		
	(Disability rate)			thousand)(Disability rate)			(Disability rate)		
	0-4 years	5-14 years	Total	0-4 years	5-14 years	Total	0-4 years	5-14 years	Total
			(Average)			(Average)			(Average)
2003 <sup>a</sup>	29.7 (4.7%)	169.1 (12.4%)	196.0 (10.06%)	23.8 (3.9%)	97.3 (7.5%)	120.9 (4.37%)	53.5 (4.3%)	266.4 (10.0%)	317.9 (8.25%)
2009 <sup>b</sup>	28.1 (3.9%)	159.5 (11.4%)	186.3 (8.77%)	19.2 (2.8%)	81.6 (6.1%)	99.9 (4.95%)	47.3 (3.4%)	241.0 (8.8%)	288.1 (6.95%)
2012 <sup>b</sup>	28.0 (3.7%)	159.7 (11.2%)	187.4 (8.54%)	25.0 (3.5%)	83.8 (6.2%)	108.8 (5.23%)	53.3 (3.6%)	244.4 (8.8%)	295.6 (6.91%)
2015 <sup>b</sup>	36.7 (4.67%)	178.6 (11.99%)	214.2 (9.41%)	17.8 (2.39%)	98.7 (6.98%)	115.4 (5.35%)	52.8 (3.45%)	270.8 (9.32%)	329.3 (7.42%)

<sup>a</sup> In 2003, n = 38,511,

<sup>b</sup> In 2009, n = 38,844,

<sup>c</sup> In 2009, n = 42,758,

<sup>d</sup> In 2015, n = 44,365.

Table 2. Prevalence of Total Children with a Disability, By Selected Disability Groups and Time Period, ABS-SDAC, 2003-2015.

	2003		2009		2012		2015		<i>Percent Change per cohort</i>
	(per thousa nd)	(%)	(per thousa nd)	(%)	(per thousa nd)	(%)	(per thousan d)	(%)	
All Disability	317.9	8.25	288.1	6.95	295.6	6.91	329.3	7.42	- 0.25
Sensory or Speech	122.1	3.17	119.3	2.88	119.9	2.80	140.3	3.16	- 0.0003
Intellectual Disability	162.9	4.23	160.7	3.88	155.9	3.65	190.1	4.28	- 0.008
Physical Restriction	107.2	2.78	80.0	1.93	80.0	1.87	79.2	1.79	- 0.363
Psychological	35.2	0.91	46.5	1.12	36.6	1.49	77.3	1.74	0.286 <sup>a</sup>

<sup>a</sup>Test of linear trend over 4 time periods,  $p < 0.05$

Table 3. Estimates of Children with a Severe/ Profound Core Activity Limitation and Schooling Restrictions for 2003 – 2015 by Age and Sex.

		Sever/Profound Core Activity Limitation				Schooling Restrictions			
		2003	2009	2012	2015	2003	2009	2012	2015
		(per thousand)	(per thousand)	(per thousand)	(per thousand)	(per thousand)	(per thousand)	(per thousand)	(per thousand)
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Boys									
	0-4 years	19.9 <sup>a</sup> (3.19)	20.6 (2.83)	18.0 (2.37)	20.1 <sup>a</sup> (2.56)	-	-	-	-
	5-14 years	88.1 (6.55) <sup>b, c</sup>	92.0 (6.56) <sup>b, c</sup>	90.1 (6.29) <sup>b, c</sup>	98.6 (6.32) <sup>b, c</sup>	21.7 (1.61)	21.7 (1.55)	16.1 (1.12)	27.4 (1.84)
Girls									
	0-4 years	15.9 <sup>a</sup> (2.65)	11.7 <sup>a</sup> (1.7)	17.5 <sup>a</sup> (2.42)	9.5 <sup>a</sup> (1.28)	-	-	-	-
	5-14 years	45.2 (3.52)	40.9 (3.07)	43.4 (3.19)	16.3 (1.15)	20.2 (1.57)	9.8 (0.74)	11.9 (0.88)	16.3 (1.15)

<sup>a</sup> Estimate has a relative standard error of 25% to 50% and should be used with caution

<sup>b</sup>  $p \leq 0.05$ , boys vs. girls.

<sup>c</sup>  $p < 0.05$ , ages 0-4 vs. 5-14.

Table 4. Number and Estimates of Disability Type Based on the Main Condition Reported for Children Aged 0-14 Years for the ABS, SDAC, 2003-2015

		Sensory or Speech		Intellectual disability		Physical restriction		Psychological		Head Injury, stroke or brain damage		Others		Not applicable	
		(per thousand)	%	(per thousand)	%	(per thousand)	%	(per thousand)	%	(per thousand)	%	(per thousand)	%	(per thousand)	%
2003															
	Boys	79.6	4.04% <sup>b</sup>	106.0	5.38% <sup>b</sup>	59.7	3.03%	26.4	1.34% <sup>b</sup>	6.9	0.35%	46.8	2.38%	1,771.9	89.95%
	Girls	44.0	2.34%	57.3	3.05%	48.5	2.58%	10.1	0.54%	1.8 <sup>*</sup>	0.10%	21.9	1.16%	1,759.4	93.57%
	All children	122.1	3.17%	162.9	4.23%	107.2	2.78%	35.2	0.91%	9.0	0.23%	69.6	1.81%	3,532.3	91.72%
2009															
	Boys	81.6	3.84% <sup>b</sup>	111.1	5.23% <sup>b</sup>	45.6	2.15%	33.9	1.60% <sup>b</sup>	7.5	0.35%	38.6	1.82%	1,940.0	91.29%
	Girls	38.1	1.89%	49.4	2.45%	35.1	1.74%	12.0	0.59%	6.8 <sup>a</sup>	0.34%	24.3	1.20%	1,918.1	95.01%
	All children	119.3	2.88%	160.7	3.88%	80.0	1.93%	46.5	1.12%	13.6	0.33%	62.0	1.5%	3,856.5	93.07%
2012															
	Boys	73.5	3.35%	103.4	4.71% <sup>b</sup>	45.8	2.09%	47.4	2.16% <sup>b</sup>	5.1 <sup>a</sup>	0.23%	40.4	1.84%	2,006.8	91.44%
	Girls	47.2	2.27%	52.8	2.54%	33.3	1.60%	15.3	0.73%	3.8 <sup>a</sup>	0.18%	27.1	1.30%	1,971.8	94.72%
	All children	119.9	2.80%	155.9	3.65%	80.0	1.87%	36.6	1.49%	9.9	0.23%	68.3	1.60%	3,980.2	93.09%
2015															
	Boys	95.4	4.19% <sup>b</sup>	131.9	5.79% <sup>b</sup>	47.4	2.08%	52.4	2.30% <sup>b</sup>	4.2 <sup>a</sup>	0.18%	38.4	1.69%	2,066.7	90.75%
	Girls	42.2	1.96%	57.5	2.67%	30.8	1.43%	24.6	1.14%	4.9 <sup>a</sup>	0.23%	22.8	1.06%	2,045.8	94.83%
	All children	140.3	3.16%	190.1	4.28%	79.2	1.79%	77.3	1.74%	7.9	0.18%	59.8	1.35%	4,110.8	92.66%

<i>P Trend</i>	- 0.0003	- 0.008	- 0.363	0.286
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<sup>a</sup> Estimate has a relative standard error of 25% to 50% and should be used with caution.

<sup>b</sup>  $p \leq 0.05$ , boys vs. girls.

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Table 5. Disability Prevalence Rate of All Reported Disabling Conditions by Type of Condition for 2003, 2009, 2012 And 2015

Disability Type	2003			2009			2012			2015		
	Boys	Girls	All	Boys	Girls	All	Boys	Girls	All	Boys	Girls	All
	Children			Children			Children			children		
	%	%	%	%	%	%	%	%	%	%	%	%
Loss of Sight <sup>c</sup>	0.45 <sup>b</sup>	0.10	0.30	0.14 <sup>b</sup>	0.07	0.15	0.13	0.12	0.14	0.10	0.04	0.08
Loss of hearing <sup>c</sup>	0.62	0.48	0.50	0.40	0.32	0.36	0.29	0.25	0.31	0.23	0.24	0.20
Speech difficulties	3.27 <sup>b</sup>	1.82	2.58	3.42 <sup>b</sup>	1.58	2.55	3.07	1.95	2.55	1.98	0.91	1.44
Breathing difficulties <sup>c</sup>	1.14 <sup>b</sup>	0.67	0.95	0.56	0.48	0.52	0.42	0.35	0.42	0.11	0.13	0.12
Chronic or recurring pain or discomfort	0.40 <sup>b</sup>	0.16	0.27	0.13	0.15	0.18	0.20	0.17	0.20	0.29	0.21	0.27
Blackout, seizures or LOC <sup>d</sup>	0.58	0.57	0.60	0.45	0.34	0.40	0.42	0.38	0.42	0.36	0.20	0.29
Slow at learning or understanding <sup>c</sup>	5.28	3.05	4.19	5.20	2.34	3.85	4.73	2.58	3.64	3.95 <sup>b</sup>	1.69	2.90
Incomplete use of arms and fingers <sup>c</sup>	0.32 <sup>b</sup>	0.18	0.26	0.23	0.15	0.25	0.27	0.16	0.20	0.04	0.00	0.02
Difficulty gripping or holding things <sup>c</sup>	0.72	0.48	0.58	0.55	0.53	0.51	0.63	0.30	0.48	0.09	0.03	0.06
Incomplete use of feet or legs <sup>c</sup>	0.55 <sup>b</sup>	0.14	0.36	0.24	0.16	0.22	0.19	0.30	0.24	0.07	0.11	0.07
Nervous or emotional condition	0.40 <sup>b</sup>	0.22	0.28	0.70	0.20	0.43	0.72	0.33	0.54	0.27	0.30	0.31
Restriction in physical activity or work <sup>c</sup>	1.05	0.71	0.83	0.59	0.59	0.55	0.85	0.42	0.63	0.13 <sup>b</sup>	0.06	0.07
Disfigurement or deformity <sup>c</sup>	0.48	0.49	0.46	0.30	0.51	0.40	0.34	0.43	0.32	0.10	0.22	0.13

Mental illness	1.14 <sup>b</sup>	0.38	0.80	1.31	0.38	0.90	1.82 <sup>b</sup>	0.61	1.23	0.32 <sup>b</sup>	0.08	0.23
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Note: Children with one or more disabilities are counted several times.

<sup>a</sup> Estimate has a relative standard error of 25% to 50% and should be used with caution.

<sup>b</sup>  $P \leq 0.05$ , boys vs. girls.

<sup>c</sup> Test of linear trend over 4 time periods,  $p \leq 0.05$

<sup>d</sup> LOC: Loss of Consciousness